FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

NOVEMBER, 1950

Rampaging Rural Fires Which Swept San Diego, Cal., Areas in October Were Fought by Municipal, State and Federal Fire-Fighters.

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A CASE - SHEPPERD - MANN PUBLICATION

WHY

1. Simplicity In asphyxial emergencies speed saves lives and simplicity means speed. Emersons have it. Turn on the oxygen, move one lever and apply the mask.

2. Safety The pressures are effective, yet have never harmed a lung, not even a baby's. They are approved by the American Medical Association — and are not adjustable. ★ More oxygen is brought to the lungs than by manual artificial respiration, yet there is no bodily pressure to endanger an injured or burned person. ★ The Emerson Resuscitator mounted in the carrying case has separate passageways throughout the mechanism for inhaled oxygen and exhaled gases (a feature covered by U. S. Patent No. 2268172). ★ The case sets flat and won't topple, even if an extension hose is tugged.

3. Efficiency Is it important that your Emerson runs longer on a given quantity of oxygen? Far out on a beach or at some other remote place this factor may save a life.

4. Quality Workmanship and materials throughout are superlative, guaranteed by the factory (for two years) and checked by our representatives throughout the United States and Canada.

5. Adaptability Standard models can be adapted for *dual*, *triple*, or *quadruple* use. ★ Extension hoses can be used to give full protection 400 feet or more away from the parent machine, complete with *aspirator* (as well as *resuscitator* and *inhalator* functions). ★ Large cylinders can be hooked up, for long cases, by using a flexible connector. ★ Small cylinders can be changed with one hand by a man who is holding the mask on a patient's face with the other.

EMERSON *Resuscitators*

are TRUSTED IN EMERGENCIES

Such Advantages Mount Up

They Can Help You Save Lives

Write for complete details and Medical References

J. H. EMERSON CO.

22 COTTAGE PARK AVE., CAMBRIDGE 40, MASS.

PAGE

E(S) MISSING

RING

for NOV

Don't let "just thinking about it" rob you of the precious minutes you have, to plan, select and install the best possible warning system.

This time avoid the mistakes of World War II when fear, haste and inexperience led to the selection of woefully inadequate and inferior equipment.

The only effective system is an electric system, the only one which alerts instantly, unfailingly from a central control point.

Federal sirens are the ideal *permanent* warning signals.

- **They are the only signals which require no maintenance except annual greasing.**
- **They are the only signals which can be reliably operated by remote centralized control.**

Obtain the best protective warning immediately. Follow the ultimate judgment of those large and small communities which, in World War II, made careful original selections, or by later tests replaced inferior, clumsy, and inadequate signals with Federal General Alarm Sirens.

Write us for information about your particular local problem.

FEDERAL ENTERPRISES, INC.

FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

8702 SO. STATE STREET • CHICAGO 19, ILLINOIS

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

From One Who Knows

"EXPERIENCE is the best of schoolmasters, only the school-fees are heavy." The fire departments of Japan, Germany and other nations learned this truism, during World War II. They learned it the hard way.

● We in America, thus far, thank the Lord, have been spared their terrible ordeals; nevertheless, some of our fire forces are "learning the hard way"—by bitter experience, what fire is, what it can do—and what is necessary to thwart it.

● Right now the question is: how long are we going to be spared the devastation that was Japan's? It's all right to count on the Lord, but somebody must prepare and pass the ammunition.

● It is getting tougher and tougher to secure deliveries of that "ammunition"—in the form of fire fighting equipment and apparatus. Our bet is that priorities, like those of the last war, are just around the corner. Where will that catch you, Chief!

● We'd like to close with a quotation from a letter received from the Superintendent of Maintenance of the Tokyo Fire Department, Mr. Okawa. He writes: *"As an enthusiastic subscriber to* FIRE ENGINEERING *I like to extend my great appreciation for the fact that the journal is an endless resource of modern fire professional knowledge. And at the same time I desire your strong cooperation in the establishment of the efficient Japanese Fire Department."*

● It is gratifying to know that we are helping others to learn — and not the "hard way."

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage and Industrial Wastes Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1950, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representative, ALFRED J. HOUGHTON; Advertising Manager, WILLIAM J. GIBSON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U.S.A.

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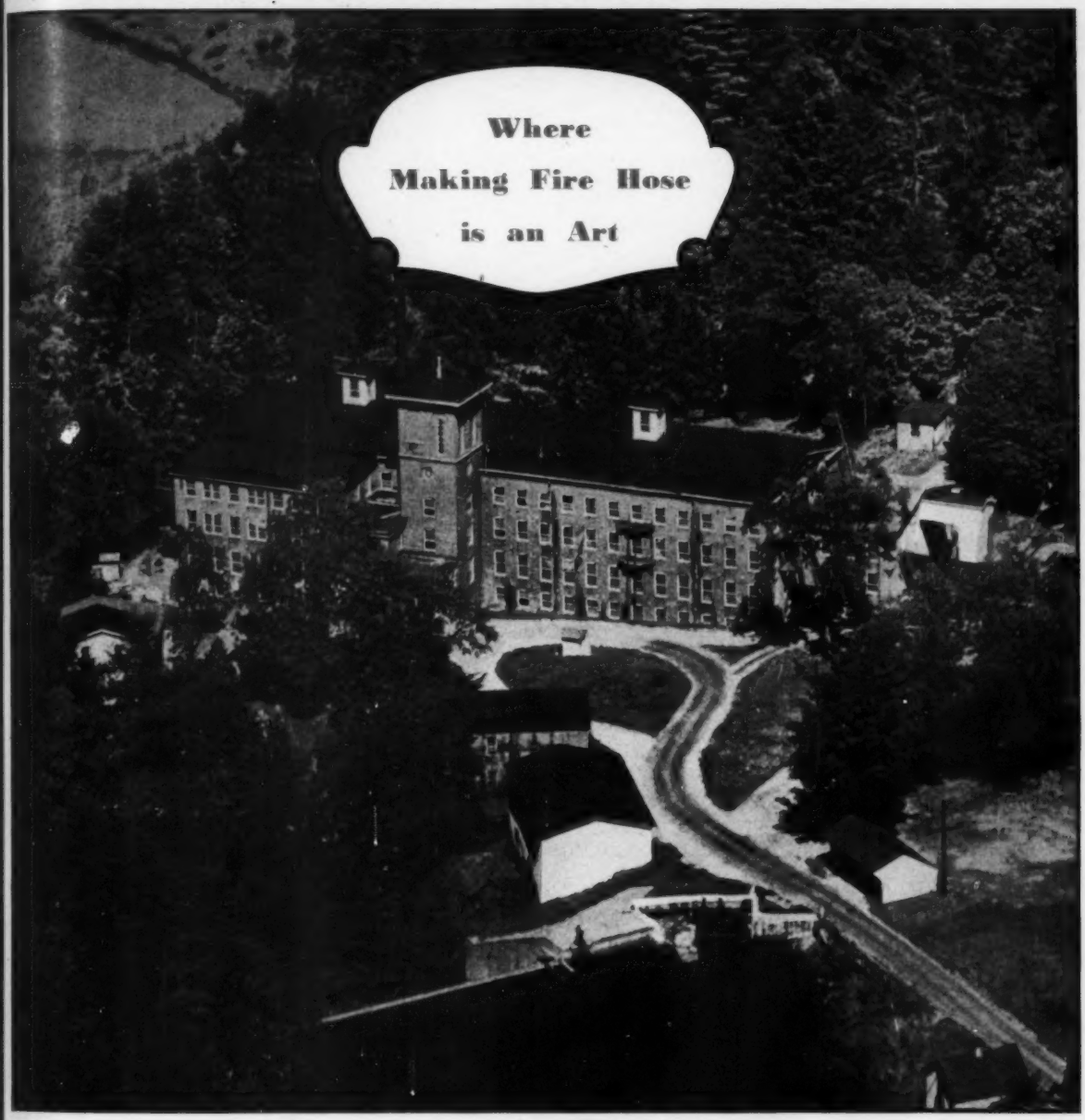

Aerial photograph of our factory at Sandy Hook, Connecticut, the only plant in the United States making municipal fire hose exclusively. Genuine Wax and Gum Treated Cotton Rubber Lined Fire Hose has been our specialty for eighty-one years.

FABRIC FIRE HOSE COMPANY
SANDY HOOK, CONN.

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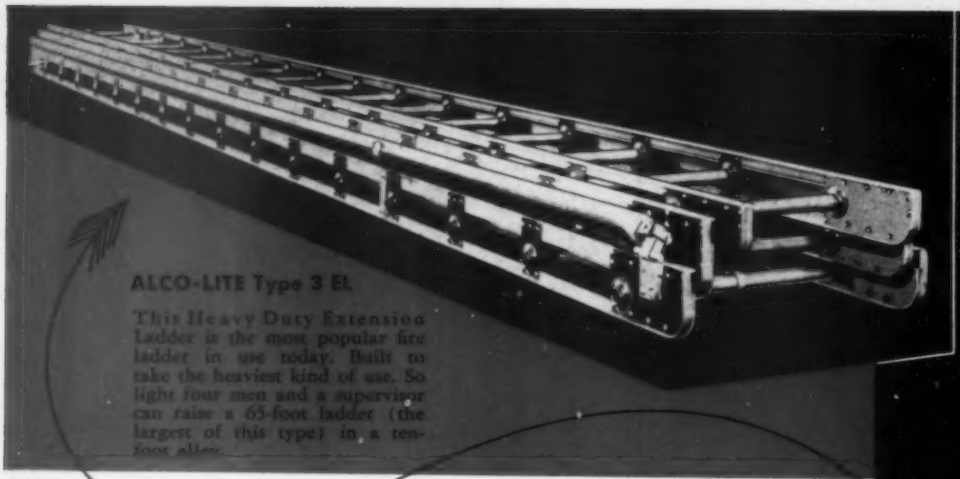


ALCO-LITE Type 3 EL

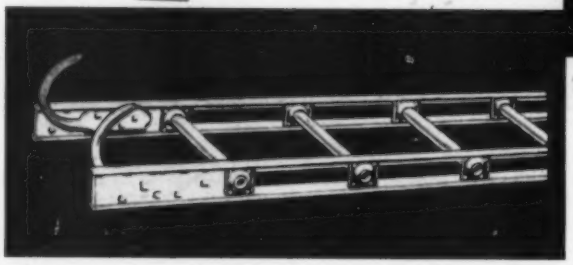
This Heavy Duty Extension Ladder is the most popular fire ladder in use today. Built to take the heaviest kind of use. So light four men and a supervisor can raise a 65-foot ladder (the largest of this type) in a ten-foot alley.

Three different ladders *One* standard of quality

There are many different types of ALCO-LITE Aluminum Fire Ladders (one for every purpose), but they all have one feature in common: the highest possible standards of workmanship and engineering. Insist on the *original* Aluminum Fire Ladder — specify ALCO-LITE on new trucks or for replacement of your old ladders.

ALCO-LITE Type RL

The Roof Ladder is light and easy to handle . . . can be used for bridging floors and roofs as well as for scaling. All aluminum except for folding hooks made from the finest forged steel.



ALCO-LITE Type SL

The Single Wall Ladder is a strong, useful ladder of extremely light weight. It is suitable for general fire-fighting and is especially handy for bridging floors. A desirable adjunct to every fire company's scaling equipment.

ALCO-LITE ALUMINUM LADDERS

ALUMINUM LADDER COMPANY

200 CARRIE STREET • WORTHINGTON, PENNA.

IN CANADA: C. E. HICKEY & SONS, LTD.
HAMILTON, ONTARIO

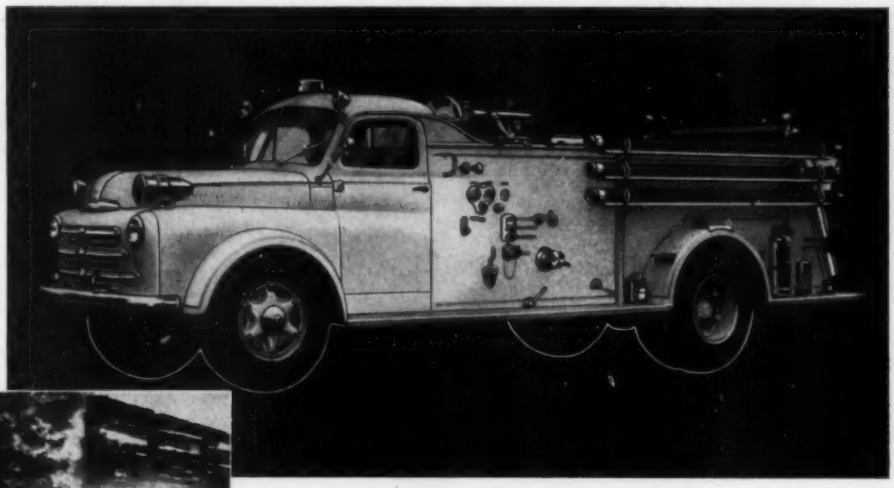
The Original Manufacturer of Aluminum Fire Ladders

SINGLE WALL LADDERS • LIGHT-DUTY EXTENSION LADDERS • HEAVY-DUTY 2, 3 AND 4-SECTION EXTENSION LADDERS • ROOF LADDERS • FOLDING LADDERS • PIKE POLES

CATALOG ON REQUEST

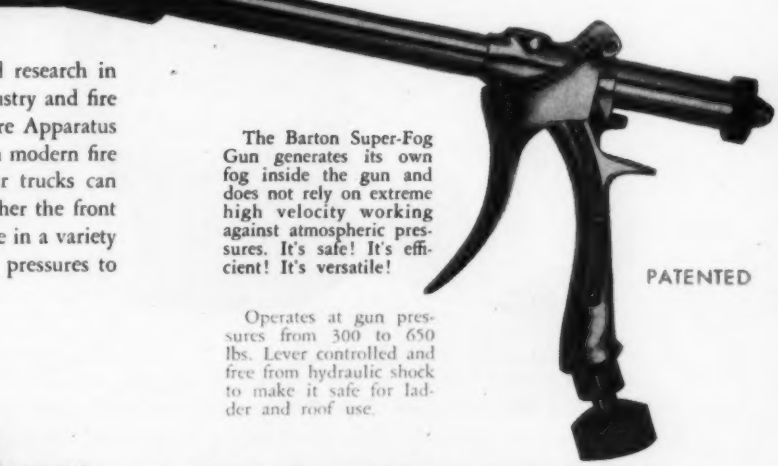
The Latest in Fire Apparatus and

BARTON SUPER FOG



Standard equipment on all American Fire Apparatus trucks is one or more Barton Super-Fog Guns. Now you can blanket more fire than ever before with perfect ease of operation. Mere finger pressure gives you a variety of streams from powerful straight streams to short range fog to all important long range fog capable of extinguishing a tremendous amount of fire. To protect the hoseman, absorb the heat, smother and blanket the fire quickly and effectively, and cut water damage to an absolute minimum—use Barton Super-Fog.

Over 25 years of experience and research in keeping with the automotive industry and fire fighting methods has given American Fire Apparatus the answer to producing the very latest in modern fire fighting apparatus and fog streams. Our trucks can be built on your favorite chassis with either the front or midship mounted fire pumps that come in a variety of sizes, all of which produce sufficient pressures to operate the Barton Super-Fog Gun.



The Barton Super-Fog Gun generates its own fog inside the gun and does not rely on extreme high velocity working against atmospheric pressures. It's safe! It's efficient! It's versatile!

PATENTED

Operates at gun pressures from 300 to 650 lbs. Lever controlled and free from hydraulic shock to make it safe for ladder and roof use.

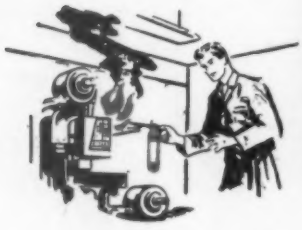
American **FIRE APPARATUS CO.**

BATTLE CREEK, MICHIGAN

MERE FINGER PRESSURE BRINGS YOU A WIDE VARIETY OF SUPER-FOG

Safety First Safe-T-meter

THE SENSATIONAL NEW LINE OF HAND PORTABLE, DRY CHEMICAL FIRE EXTINGUISHERS THAT OFFERS POSITIVE ON-THE-SPOT FIRE PROTECTION!



NEW RECHARGE CYLINDER MAKES PRESSURIZING EASY!

Just follow simple directions on recharge cylinder label... no tools or technical knowledge is needed. When cylinder is expended return to your Safe-T-Meter dealer for replacement.

Write also for information concerning the complete line of Safety First Industrial Dry Chemical Extinguishers.

Ranging in size from 5 lbs. to 30 lbs., there is an extinguisher to fit your every need!

SAFE-T-METER FEATURES!

B-2, C-2 Underwriters' Rating, Pressure Gauge Tells Status Of Extinguisher At A Glance, Can Be Used Intermittently, On-The-Spot Refilling, No Tools Required

Now, for the first time, Safe-T-Meter, Safety First's revolutionary, new visual gauge fire extinguisher offers positive on-the-spot protection! Its easy-to-read dial tells its status at a glance . . . eliminates the danger of an empty extinguisher when fire strikes! Available in 2½ and 4 lb. models, Safe-T-Meter weighs so little and is so easy to operate that even a child can use it. Economical, too, because Safe-T-Meter's sturdy, precision built construction lasts a lifetime . . . its highly effective Safety First dry chemical is inexpensive to replace. Write now for complete information!

SAFETY FIRST PRODUCTS CORP.

ELMSFORD • NEW YORK

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2. not this

..but this

no confusing dials valves or levers

The Seagrave Pump Panel does not resemble the control panel of a trans-continental air liner . . . No, the Seagrave Panel is simple and uncomplicated. All gauges are grouped together and are at eye level. The pressure governor control has a rotating, plastic dial that becomes illuminated as soon as it is turned to normal pump pressure.

Yes, everything is under control of the operator of a Seagrave Pumper. He does the job without fuss, worry and confusion.

THE SEAGRAVE CORPORATION—Columbus, Ohio Bickle-Seagrave, Ltd., Woodstock, Ont.

THE GREATEST NAME IN FIRE APPARATUS

Seagrave

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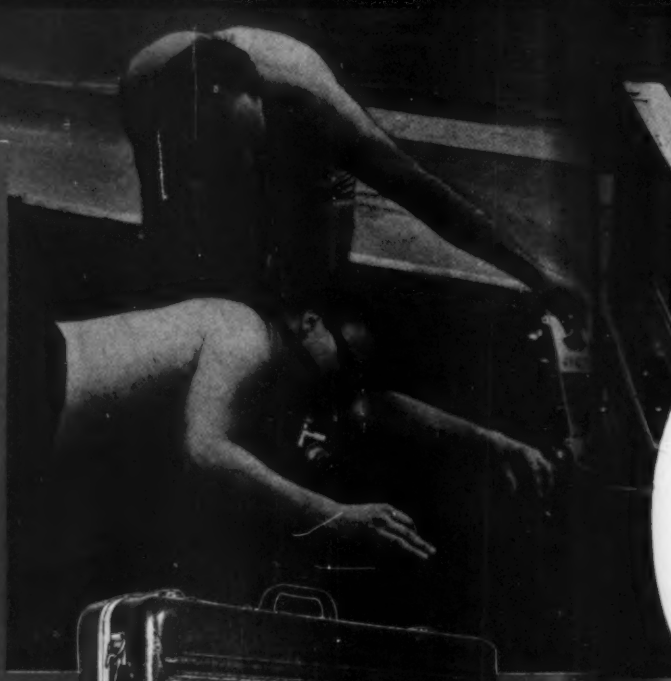
AFTER YEARS OF DEVELOPMENT . . .

Announcing the M·S·A P

SAFE, AUTOMATIC, ARTIFICIA RES

DESTINED FOR THE GREATEST ACCEPTANCE EVER



MODERN CARRYING CASE

for fast, easy transportation!

The lightweight M.S.A. Pneolator carries easily in its sturdy fibreglas case. Designed for rough, fast handling, the case is reinforced for extra strength and has a padded shoulder strap for use where long-distance carry may be required.

APNEOLATOR

IARESPIRATION *without suction!*

NCEVER ACCORDED A LIFESAVING INSTRUMENT!

Compare the facts:

COMPLETELY AUTOMATIC —
NO SUCTION —
SAFE TO USE —
MEDICALLY CORRECT —
LIGHT IN WEIGHT —
READILY PORTABLE —
SIMPLE TO OPERATE —

M·S·A *Pneolator*

NOW—for the Fire Service, the highest development in automatic artificial respiration—*without suction!* The M.S.A. Pneolator is the product of long, determined research to develop a *safe* life-saving instrument that would "breathe" for the victim of respiratory failure . . . one that would do the whole job without manual assistance . . . but above all, one that would operate *without suction* and so avoid all danger of harm to lung tissues when life is in the balance!

The many new and effective features of the M.S.A. Pneolator are of first importance to everyone concerned with life-saving in your Department. Write for descriptive Bulletin CH-1.

Ask for a practical demonstration—now!

MSA
SAFETY EQUIPMENT HEADQUARTERS

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS AND MEADE STREETS · PITTSBURGH 8, PA.
At Your Service:
54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

FOUR WAYS AUTOMATICALLY PROTECTED

SPRINKLER SUPERVISORY and WATERFLOW ALARM

BURGLAR ALARM (Premises) (Vault)

INDUSTRIAL PROCESS SUPERVISION

HEATING SYSTEM SUPERVISION

Among the largest in New England, this Springfield, Mass., warehouse depends on ADT Central Station Automatic Protection Services to give instantaneous notification of fire, burglary and other dangerous conditions.

Thousands of warehouses and other progressive establishments of all types from coast to coast are protected automatically by ADT. The high degree of security has in most cases made it possible to effect substantial economies through modification of other more costly but less effective protection measures.

Available in more than 500 communities in the United States. Write for complete information.

ADT

Controlled Companies of
AMERICAN DISTRICT TELEGRAPH COMPANY
155 Sixth Avenue • • New York 13, N. Y.
CENTRAL STATIONS IN ALL PRINCIPAL CITIES

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

You'll go for it, too!

Mack Type 85, 75-foot aerial ladder truck recently delivered to Niles, Michigan.

HERE ARE SOME RECENT MACK AERIAL ORDERS:

Bala-Cynwyd, Pennsylvania
Ballston Spa, New York
Baltimore, Maryland (2)
Bay Shore, New York
Boston, Massachusetts
Hudson Falls, New York
Lafayette, Indiana
Little Falls, New York
Massapequa, New York
Normandy, Missouri
Niles, Michigan
North Plainfield, New Jersey
Painted Post, New York
Plainfield, New Jersey
Stamford, Connecticut
State of New York—Manhattan State Hospital
State of New York—Willard State Hospital
West Hempstead, New York

What are *you* looking for in your next aerial ladder truck? Smooth and fast performance of both ladder and truck? One-man, *jam-proof*, all-hydraulic controls? Safety and flexibility? Compact design—adapted to modern traffic and existing quarters?

That's what you'll get with the modern Mack aerial—and more! You'll get the proved power and dependability of the rugged Mack chassis and famed Thermodyne engine. Eye-winning appearance yet with easy accessibility of ground ladders and truck equipment. And near-at-hand service from Mack's nation-wide network of branches and distributors.

Get the full facts from your Mack representative on this popular apparatus. You'll go for it, too—like all the departments that have ordered Mack aerials.

Be Performance-Wise
Modernize with

Mack
FIRE APPARATUS
Outlasts Them All

MACK MANUFACTURING CORPORATION
Fire Apparatus Division
Long Island City 1, New York

Factory branches and distributors for service and parts in all principal cities. In Canada: Mack Trucks of Canada, Ltd.

3663

TRIPLE COMBINATION PUMPERS—500 TO 1500 GPM... SQUAD AND HOSE WAGONS... AERIAL, CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

Unique grounded-grid r-f input circuit provides high receiver sensitivity, greater frequency stability, and simplified tuning.

Heavy-duty dynamotor equipped with cooling fins. Mounted near chassis center of gravity. Excellent balancing. No vibration, tearing effects, or undue strains.

Built-in filter reduces spurious emission to 1000 Mc. —*and beyond.* All spurious emissions and harmonics in the band down at least 85 db.

Convenient pin jacks provide easily accessible points for servicing and tuning.

Frequency stability is within 0.001% (without an oven); is within 0.0005% (with oven) between −22° and +140° F.

30 watts output
152-174 Mc
CMV-4A—6 volt
CMV-4B—12 volt

Now *the 30-watt SUPER Carfone*

A revolutionary new 2-way radio for police, fire fighting, public utilities, taxis, pipelines, and construction services

- ☑ Clear reception assured *within a few feet* of adjacent-channel stations because of superior circuit design.
- ☑ Message intelligibility improved by raising average modulation to 70% (ordinary transmitters give 10 to 35%).
- ☑ Spurious emissions at any frequency down at least 85 db (20 times better than required by FCC). Meets all RMA requirements.
- ☑ Economical to operate (low current drain on stand-by; high-efficiency amplifier takes less power). Tubes are operated for optimum life; at least half of them idle at 1/5 of maximum rating.
- ☑ Excellent performance in crowded metropolitan areas, as well as farther out in the suburbs where the going is tough.
- ☑ Cuts down interference *within the band* at least 100 db (100 times better than required by FCC regulation).
- ☑ Balanced construction reduces vibration—extends equipment life.

The Super Carfone 30 package— (1) single-unit transmitter, receiver, and power supply; (2) control box; (3) microphone and antenna; (4) loudspeaker.

RCA

MOBILE COMMUNICATIONS SECTION
RADIO CORPORATION of AMERICA
ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal

It will help if you mention FIRE ENGINEERING *when writing advertisers*

Entire 3rd Floor cleared of smoke and hot gases immediately permitting firemen to advance into building with handlines in one minute-Fire under control within 5 minutes

A front page newspaper story of a recent fire told of a remarkable job of extinguishing a two alarm fire in a 3 story building by the New Haven Fire Department.

A huge 500 gpm Rockwood WaterFOG Nozzle, utilizing a new type of attack from an aerial ladder, played an important role in putting out this fire. Here, in his own words, are the facts which we were able to obtain directly from Chief Paul P. Heinz of the New Haven Fire Department.

"Attached is a photograph of a recent fire in our city. The Rockwood 500 gpm fog nozzle did an excellent job operating from our aerial ladder.

"The fire originated on the 2nd floor of a 3 story building and extended to the 3rd floor by means of an inside stairway and elevator shaft. The alarm was received at 6:25 P. M. on June 26, 1950 and when the first company arrived, heavy smoke and gases were being forced through the windows on the 3rd floor, front. Hand lines were ordered on the 2nd floor and in the rear but firemen were unable to advance due to extreme heat. A second alarm was transmitted at 6:30 P. M. At 6:35 P. M., the 500 gpm fog nozzle went into operation from our aerial ladder and in less than a minute the entire 3rd floor area was blackened out. The hand lines on the 2nd floor began to advance into the building and within 5 minutes the fire was under control.

"From my observations the big fog nozzle did accomplish two purposes. (1) it cleared the 3rd floor area of smoke and hot gases immediately and (2) the water particles were forced down the elevator shaft and inside stairway, cooling off the floor areas making it possible for the firemen to advance their lines. Our operating pressures at the nozzle was 150 lbs.

"This particular fire, like others we have had in the past, convinces us, more than ever before that broken water will do an excellent job on most any type of fire where the solid stream was considered effective."

Our bulletin B-500 describing the 500 gpm Rockwood WaterFOG Nozzle for use on ladder pipes or deluge guns will be sent to you upon request.

ROCKWOOD

Portable Fire Protection Division

ROCKWOOD SPRINKLER COMPANY

54 HARLOW STREET WORCESTER 5, MASSACHUSETTS

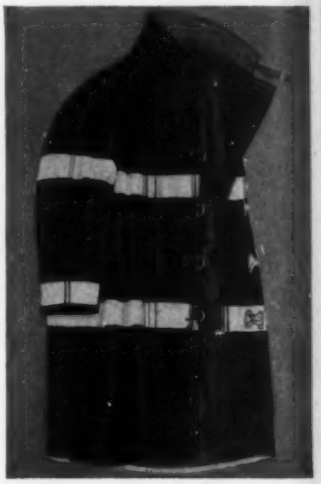
Friend of the Firefighter!

MIDWESTERN
PROTECTIVE CLOTHING

THE Original

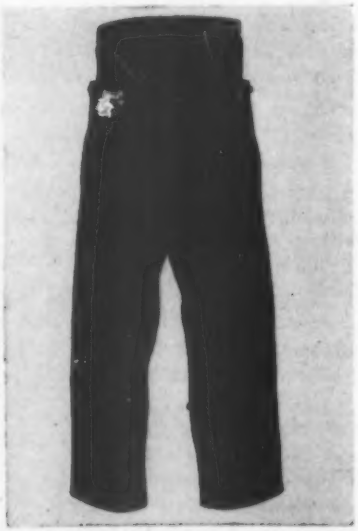
Mackinaw Striped Safety Coat

Reduces Accidents — Saves Lives



Several years ago, Midwestern developed the *original* striped safety coat. The highly visible stripes are moulded to and vulcanized as part of the material. Thousands of Midwestern Safety Coats are serving fire departments throughout the world. Service records prove that these garments not only offer high safety visibility, but have the qualities required to withstand the rough usage required in your hazardous work of protecting life and property against fire.

All Midwestern Safety Coats have the moulded-in yellow stripes which are a part of the garment and not painted and sewed on. The *original* Midwestern Safety Coat will give you trouble-free protection and dependable service.



• PROTECTION
• COMFORT
• SERVICE

Largely through superior quality, design, fabric texture and advanced features, Midwestern is a leader in the field of firemen's clothing. All Midwestern specialized protective clothing have been developed from long years of experience . . . and each detail of design adds to the service, comfort, convenience and long wear of the garment.

Regardless of climate and performance demanded, you will find a fabric to exactly suit your needs in our vast selection of crude rubber and fabric materials. The softness and flexibility of the high-grade materials used is your assurance of long service and real protection. For full information on our complete line, see your Midwestern dealer. A letter to the factory will also bring you material samples for your inspection.

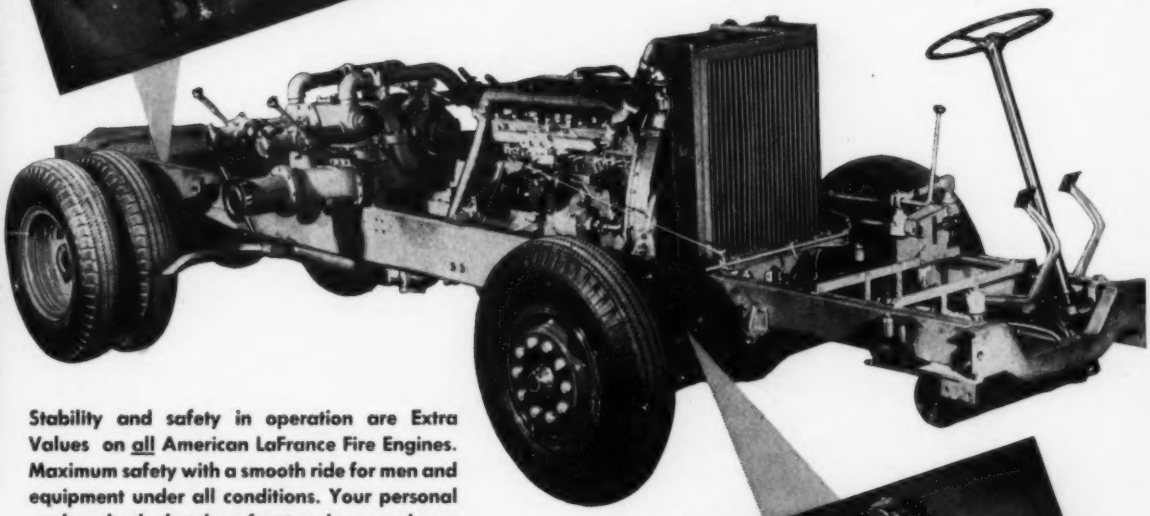
BUNC BUNDING WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Coats**

THERE'S *Extra Value* FOR YOU *in* AMERICAN-LAFRANCE FIRE ENGINES

FOR A *Safer, Smoother* RIDE . . . SHOCK ABSORBERS BOTH FRONT AND REAR

Another Exclusive American LaFrance Feature!



Stability and safety in operation are Extra Values on all American LaFrance Fire Engines. Maximum safety with a smooth ride for men and equipment under all conditions. Your personal car has shock absorbers front and rear and your fire engine is safer, too, when so equipped.

- Fifth in a series of advertisements featuring Extra Values in American LaFrance, first choice of the fire service.

AMERICAN-LAFRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.
LAFRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO 9, ONTARIO, CANADA

PUTS OUT AND KEEPS OUT...
FLAMMABLE LIQUID FIRES
NATIONAL FOAM SYSTEM
FIVE U. S. GALLONS
NATIONAL
AER-O-FOAM
AER-O-FOAM ACTS QUICKLY...
PREVENTS FLASHBACKS...STOPS LOSSES
Wherever flammable liquids are produced, stored or transported, "quick acting" AER-O-FOAM should be on hand to guard against losses.
In a matter of seconds AER-O-FOAM forms a thick, tough, long-lasting airtight blanket of foam that snuffs out flames . . . insulates threatened areas . . . prevents flashbacks. Fire-tested AER-O-FOAM flows freely and quickly, yet clings fast even to vertical surfaces. It is non-corrosive and easily brushed away when dry.
For quick, fire-tested protection of plants, fleets, warehouses and equipment, specify and use National AER-O-FOAM. For complete fire fighting equipment and engineering assistance call on National Foam Engineers.
NATIONAL FOAM SYSTEM, INC.
Headquarters for Foam Fire Protection
WEST CHESTER, PENNSYLVANIA

Prepare Now

for community defense with

John BEAN HIGH-PRESSURE FOG FIRE FIGHTERS

NOW THAT air attack is more than a possibility, fire protection is a necessity for your community!

That means bringing your department up to full strength by replacing obsolete apparatus with modern, dependable equipment. It also means advising manufacturers on how to protect their industries in case of air attack.

John Bean High-Pressure Fog Fire Fighters are equally effective for local fire departments or manufacturers because of these five important fire-fighting exclusives:

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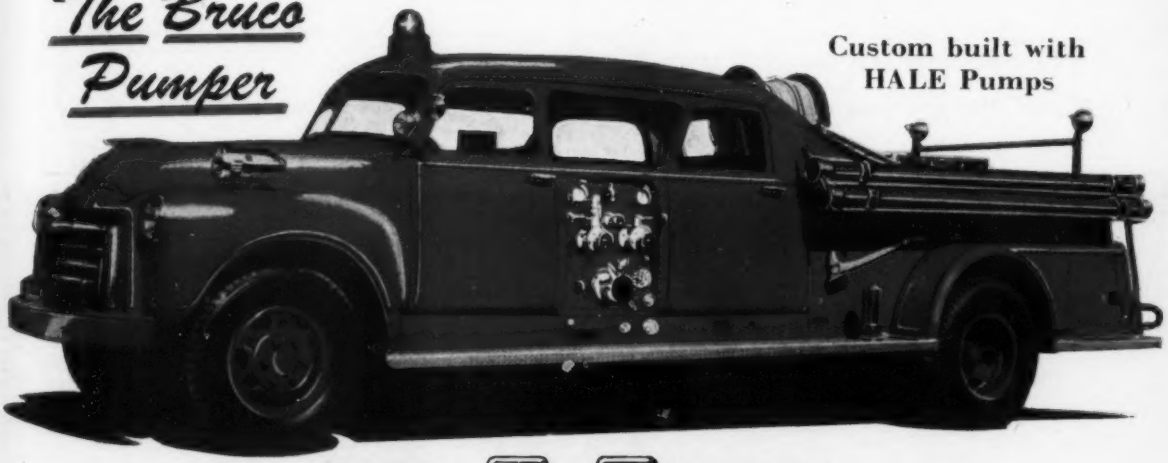

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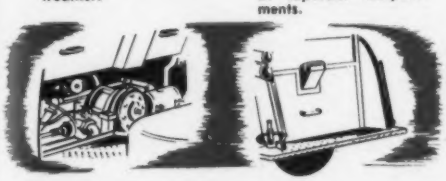

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- **⅔ of the *Life Loss* by fires occurs in dwellings.**

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The absence of quickly accessible and public means for calling the fire department contributes to delay and unnecessary fire waste. According to the Standards recommended by the National Fire Protection Association, it should not be necessary, in residential districts, to traverse more than one block or 500 feet in order to reach a public fire alarm box.

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NOVEMBER, 1950

FIRE ENGINEERING

VOL. 103, NO. 11

With the Editor

"Side-Line" Fire Fighters! Sunnyvale, Cal. (pop. 10,000), has established a unified "public safety department with all employees responsible for both police and fire-fighting duties."

Prior to this step, Sunnyvale had a police department of 16 men, a paid fire chief and 30 volunteers. The police budget was $60,000 and it was claimed that an adequate fire service would more than double this figure, and would have taken practically all the city's property tax revenues.

The new department uses a three platoon system and provides all employees with a 40-hour week of five consecutive eight-hour days. All present police personnel will be given basic fire-fighting training and six new men will be given training in both fire and police work. Each of the three platoons will provide a man on duty as "driver-engineer" at each of two fire stations at all times.

It is believed the integrated training program will permit each platoon to provide its own relief men and the two off duty platoons will alternate in providing emergency call men for either police or fire emergencies. Fire company strength will be made of full paid public safety men on shift and on call and will be supplemented by volunteer firemen serving as call men.

Proponents of this move, including the council and city manager, are aware that some form of organization unifying police and fire services has been attempted in a number of cities "without too much success." They blame the failure to the "swallowing up of one of these services by the other" and failure to adequately train men in both fields to be capable of performing either function in a satisfactory manner.

These officials reportedly do not relish the idea of having men "who are not kept busy, especially firemen who were required to spend long hours at a fire station away from their families."

As we see it, this is another expediency to cut expenses of the two most essential municipal emergency services. On paper it appears meritorious. In operation it is courting disaster.

The argument that it is necessary to spend twice $60,000 (the police department's budget) to have adequate fire protection for the city is fallacious. There are many cities of 10,000 and over, served by volunteer firemen—some with combined volunteer and paid forces, rated as high in efficiency as full-time paid fire forces.

The argument about paid firemen having nothing to do in their tours is equally fallacious. Have not the city fathers of Sunnyvale heard of fire prevention and protection inspections, in-service training, and other phases of fire protection that are occupying all working hours of firefighters?

Perhaps these officials have also overlooked the additional very important fact that any serious emergency such as a large fire imposes peak demands upon both fire and police services, simultaneously. Anyone who doubts this, and the outcome when policemen have to "double in brass" as firemen, and vice versa, can take a page from the recent holocaust in Rimouski, Quebec. That disaster proved that far from benefiting by this integrated plan, the reverse is true. In the crisis neither police nor fire forces measured up. All the "specialized training" in fire and police duty which Sunnyvale plans to provide, cannot enable a man to use a nightstick and a nozzle simultaneously.

Even if, by training and salary incentive, supermen can be developed who can be "all things to all services," what assurance is there that off-shift "experts" will all be on hand when the emergency strikes? Conditions are bad enough now in full-paid departments, where off-shift men are being called on multiple alarms. What will happen when they can be summoned to duty for police as well as fire emergencies?

As we see it, the fundamental function of a fire department is to prevent fires and suppress them. The fundamental functions of a police force is to prevent crime and catch criminals. Preventing crime is a task to occupy the full time and effort of any man or corps of men. Preventing fires is likewise a full time task for any man or body of men. We have yet to see the fireman or policeman who, faced with an emergency, can handle more than his own task, for which he was trained (or should be).

Fire fighting is not a "side line" job—it never will be.

Fred Shepperd

Delayed Alarm Held Cause of Fire Extension at Atlanta

Masonic Temple Razed by $750,000 Blaze; Delay in Calling Department Gives Fire Head Start

A STAFF REPORT*

FIRE which on September 7, 1950, destroyed the historic old Atlanta Masonic Temple at Peachtree and Cain streets, that city, with reported loss of $750,000 is described by fire officials as the worst they have encountered since the Winecoff Hotel disaster in December, 1946, which claimed 119 lives.

The Masonic Temple, a familiar landmark since its corner stone was laid in 1908, was regarded as one of the sturdiest buildings of downtown Atlanta. In addition to being the meeting place of fifteen Masonic Lodges, the building was occupied on the ground floor by Beck's Shoe Store and Joseph's Dress Shop.

The building was six stories and basement in height; of brick and granite outside walls, ordinary joist construction with steel girders, and had a masonry cornice. It was not sprinklered but, ironically, workmen were engaged in installing sprinklers as part of the remodelling program being undertaken at the time of the fire. It is reported the sprinkler installation had been completed on the two lower floors of the building, but the area where the fire started, in the top of the structure, was unprotected.

Stairways in the building were of wood construction, enclosed with wood lath and plaster. Elevator likewise was enclosed with wood lath and plaster. The building had three outside fire escapes, one on Cain street and two in the rear of the property. The upper portion of the building was cut up into small rooms connecting large area auditoriums with balconies. The sixth floor, where the fire reportedly originated, contained a large auditorium and stage, with one of the three costly pipe organs located in the structure, all of which were destroyed. The outward appearance of the old structure belied its combustible interior much as did the exterior of the old Equitable Life Insurance building which burned in New York City in 1912.

There is evidence that there was a delay in reporting the fire to the fire department. According to Captain J. F. Seagraves, Assistant Fire Marshal, there must have been a delay in transmitting the alarm because, when the first alarm assignment of fire fighters went into operation, fire had involved a part of the sixth (top) floor and cockloft. Captain Seagraves was informed workmen attempted to put out the fire with extinguishers before notifying the department. This was apparently substantiated by an employee of the Temple who is quoted as saying three extinguishers failed to have any effect on the fire. Another report said that workers in the building reported smelling smoke for some little time before the fire was located. The fire alarm office received the first notification of the fire at 1:50 P.M.

What caused the fire has not been determined. Two theories are advanced by Fire Marshal R. C. Endicott and Captain Seagraves: (1) that it was

*The editors gratefully acknowledge the assistance of Captain Steve B. Campbell, Ladder 17, Atlanta Fire Department, for most of the information upon which this account is based.

Fig. 1. Beginning of the Atlanta Fire, Looking West Along Cain Street from Peachtree Street. No. 11 Aerial Ladder Is Being Raised on the Front of the Temple. The Line Up the Fire Escape Is in Operation on the Fire Before the Order to Back Down Was Given

Fig. 2. Picture Taken a Few Minutes After That Shown in Fig. 1, Showing Fire in Control of the Sixth Floor and Cock Loft; Also Beginning to Burn on the Fifth Floor. The Men Who Had Been Operating on the Fire by Way of the Fire Escape Are Shown Retreating. This View Is Looking East Along Cain Street from Spring Street

caused by a welding torch used by elevator repairmen; (2) that it started in a pile of stage equipment behind an organ on the sixth floor. An official of the Masonic Temple Company who declined to speculate on the cause said the welding torch was 75 feet away from the spot where the fire was first sighted.

Firemen Driven from Building

The telephone alarm brought five engines, three ladder and a rescue company, as well as the Acting Assistant Chief and Second Assistant Chief of Department and a Battalion Chief. The first company reached the scene in a matter of moments after the fire was reported by Albert Armstrong, secretary of the Masonic Temple Company, who turned in the alarm. Mr. Armstrong said he went to the sixth floor to investigate a reported small fire and when he got there found the whole floor balcony ablaze.

First attack on the fire was made by way of the fire escape on Cain Street, up which the crew of Engine 5 worked their line. Ladder 1 was raised to the upper part of this fire escape and efforts were made to fight the fire from the two rear fire escapes as well as by way of the inside stairway. These initial forces brought six streams into play but were forced to retreat hurriedly, when the fire, for some unexplained reason, involved the fifth floor. In this retreat some men had to abandon their lines. Two of the fire fighters were removed by aerial ladder. As shown in the illustration, the fire was through the roof at the rear and in command of the rear part of the fifth floor soon after the first of the reinforcing companies arrived.

When a section of the roof of the buiding collapsed, Second Assistant Chief N. M. Dean noticed cracks forming in the outside walls and ordered all men out of the structure and back a safe distance. From this time on all fire fighting operations had to be carried on from the exterior of the building. With a strong wind blowing, and handicapped by the type of construction of the old building, with its lack of suitable openings, heavy stone cornice and combustible interior, firemen could do little to stem the blaze which rapidly worked its way downward to involve the entire structure. In less than 30 minutes, the fire had spread to the first floor and was feeding on the stocks of the newly decorated Beck's Shoe Store and Joseph's Dress Shop.

As the flames shot high in the air above the building, burning brands were carried on the wind. At this point firemen were favored by the weather, which was rainy. Some concern however, was felt for exposures, including the Henry Grady Hotel and adjoining stores and buildings. The Awtry and Lawndes Funeral Home, directly behind the Temple, a two-and-a-half story old mansion with solid granite walls, one of the few such mansions left in the center of the city, was threatened, and firemen feared that should the back wall of the Temple fall it would considerably damage this property.

An interesting development was the fact that radiated heat broke several windows in the Henry Grady Hotel, despite the direction of the wind which was blowing from the hotel.

Fire fighters took lines into the Hotel Grady and operated streams from its windows and roofs on the Temple. Hotel employees used house lines to wet down exposed walls. Some guests were evacuated from the building. In this connection, another curious factor was noticed, this also involving the wind. It was observed that some heavy fire streams directed at the Temple held together very well until they almost reached the building where they stopped as if cut off with a knife, three or four feet from the building wall. Belief was expressed by firemen who noted this condition that the wind, hitting the front of the building, caused a strong upward draft which broke up the streams near the face of the building. It was not until after dark, and after the wind had abated, that outside streams were reported effective.

The fire raged uncontrolled well into the night. A section of the rear wall fell inward about 6:00 P.M., by which time there was little left but the skeleton of the structure. Earlier Assistant Chief Carpenter, who arrived on the third alarm, ordered men and equipment further away from the Cain Street side of the building as the walls appeared to be weakening.

Fire Telecast to Firemen

The fire made history in another way: it is said to be the first fire to be telecast in the City of Atlanta. It is certainly the first time that the city's fire fighters not at work on the fire, were able to watch the operations of their fellow fire fighters on the screens of their fire house television sets.

Station WSB-TV scored the television news beat. In the midst of a remote program from a downtown department store, the station's cameramen turned their cameras on the blazing building a few blocks away to give television observers a ringside seat. One moment the audience was looking at furniture, the next moment it saw the raging fire flash across the screen.

FIRE ENGINEERING'S correspondent, commenting on this, said it might be interesting to know that all during the fire, radio station WTAL, which is located in the Henry Grady Hotel, broadcast a running description of the fire from both the studio and from the roof of the Hotel. He said members of companies relocated in other stations followed these broadcasts very closely and with interest.

Downtown Traffic Snarled

The afternoon fire produced "one of the worst traffic snarls in recent fire fighting history: From Five Points to

(*Continued on page 932*)

Fig. 3. The Masonic Temple Fire at Atlanta Shortly Before Being Brought Under Control

Fire Service Ladders and Their Use—Part VII

Technique for Testing Fire Department Ladders

By ROI B. WOOLLEY

Editor's Note: This, the seventh in the series of chapters dealing with fire department ladders, ladder operations, evolutions and preventive maintenance, is devoted to the testing of steel aerial ladders. In this connection it is a companion installment to the chapter (October, 1950) on the testing of wooden aerial ladders.

In general, the testing of metal aerial ladders does not at this time assume the same importance in the fire service as the testing of the older, more widely used wooden types, many of which are due for replacement. Notwithstanding this fact, the editors have received numerous requests for information on the best procedures for testing the metal types and it is natural that as the latter continue to replace the wooden aerials this information will be more in demand. The test information is also desired by chiefs who desire it to complete their presentations being made their local governments for ladder appropriations.

For this reason, this chapter on testing of steel aerial ladders is included at this time rather than reserved for a later installment in the series. It will be noted that the following covers the steel aerial. It does not necessarily apply to the aluminum type aerial, which is also widey used in the fire service. If data are available it is planned to publish test information on the latter aerial in a later chapter.

As will be noticed by students in firemanship, this and considerable other test data are supplied by the manufacturers of the respective kinds of ladders. They are the ones who should know most about their own products. Their help and guidance is gratefully acknowledged.

The source material for this chapter is provided by Hubert A. Walker, Manager Motor Fire Apparatus Sales Engineering, American LaFrance-Foamite Corporation, Elmira, N. Y. It represents the test technique adopted and recommended by this company after exhaustive research.

THIS is the procedure followed for testing a hydraulic steel aerial ladder, at the time of delivery, or a later inspection.

As was pointed out in the chapter on testing wooden aerial ladders, the physical properties of steel and aluminum, such as used in metal fire department ladders, are more stable than wood. They are fixed within certain definite limits. These metals are not subject to fatigue over long periods as is wood, which continues to undergo fatigue the longer it is in use. Furthermore, metal type ladders are not subject to deterioration by age or usage, such as rotting, slivering, checking, nor are they susceptible to extreme conditions of weather as are the wood types. In short, aluminum and steel ladders require very little attention and therefore cause less concern over safety factors among fire officials than do their wood counterparts.

As was said also, operating mechanisms of metal ladders may require attention from time to time (it is well to periodically check on all such mechanisms) but the need to check and re-check the metal ladders that have been in use for some time is not as imperative as it is with the wood types. Nevertheless, there is no sound reason for not subjecting the metal aerial ladder to occasional over-all test, especially if periodic inspection indicates the possibility of something being not up to standard.

The modern aerial ladder is a costly piece of mechanism. It is vital to its fire department. As an emergency unit, it must be ready to operate at top efficiency whenever and wherever called upon. This fact is often overlooked by some fire companies and chief officers who consider this investment much like they view their personal motor cars—something that only needs a shot of oil, a full fuel tank, and a dust rag now and then to make it always ready for service.

It is a credit to the majority of fire departments, however, volunteer as well as paid, that costly essentials such as modern aerial ladders are regarded with respect and treated and maintained the same way. That is where test and check-up comes into the picture.

When such a piece of apparatus enters a fire company, it is assumed that it will be treated in that fashion, that its users and operators will be versed in its advantages and its limitations; in

Fig. 1. Measuring Distance from Rear Rung to Ground.

Fig. 2. Special Testing Bracket in Place on Top Section, Top Rung

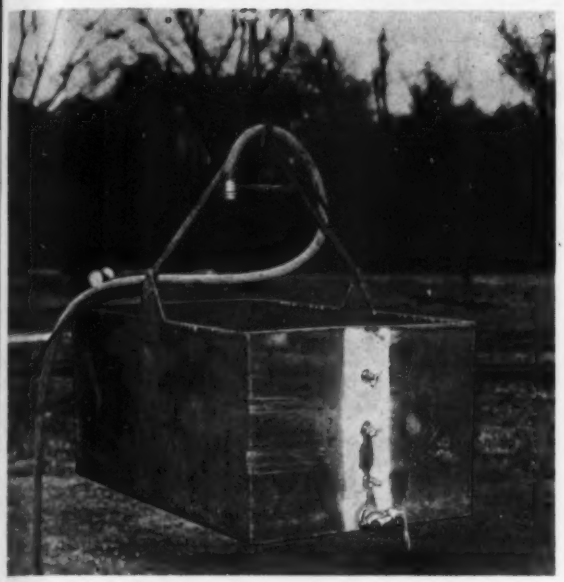


Fig. 3. Water Tank and Hose Used in Ladder Test.

Fig. 4. Tank Filled to Overflowing. Ladder Is Subjected to This Load for Five Minutes.

brief, that it will not be abused, but used as intended by its designer and builder. If, and when it is in order to test the unit, it follows that the test procedure should parallel the pattern recommended by the builders and, equally important, the test operations be conducted at least under the watchful eye of some one thoroughly familiar with aerial ladder limitations. That means, if possible, the actual test should be directed by a capable representative of the manufacturer, utilizing proper test equipment and not makeshift materials.

Pre-Test Suggestions

As has been said, it is highly advisable to keep accurate records of all tests, such as the date, weather, time, location, personnel in charge, etc. It is equally advisable to record the tests photographically, step-by-step, if at all possible. If the entire test procedure cannot be filmed, still pictures should be taken at intervals to illustrate the important findings, such as failures and defects. These pictorial data may prove priceless later as evidence and material for preparing fire department budgets, and to aid the fire chief in buttressing his requests for more equipment.

Before any test is conducted on any aerial ladder, metal or wood, it is advisable to review the service record of the ladder in question, dating from its installation in the department. Particular attention should be paid to any accidents that may have befallen it in traffic, or during laddering operations. Any repairs or replacements naturally may affect the extent and degree of test procedure.

Preferably, the test should be conducted in a secluded place away from the eyes of the curious. Spectators who are not present by invitation should be kept at a distance. The test ground should be level but not necessarily paved.

A test should be conducted in still air to avoid dynamic loading of the ladder. A strong wind acting on the long cable and test load will introduce a pendulum action that will add load to the ladder far beyond any test weight. Wind may also cause deflection of the latter, extended. Where there is a light breeze the ladder should be placed parallel to the wind so there will be no cross wind on the ladder or test cable.

The approximate test weight, which will include the testing equipment such as cables, tank (if tested by water as described herein) or platform (if tested

(*Continued on page* 940)

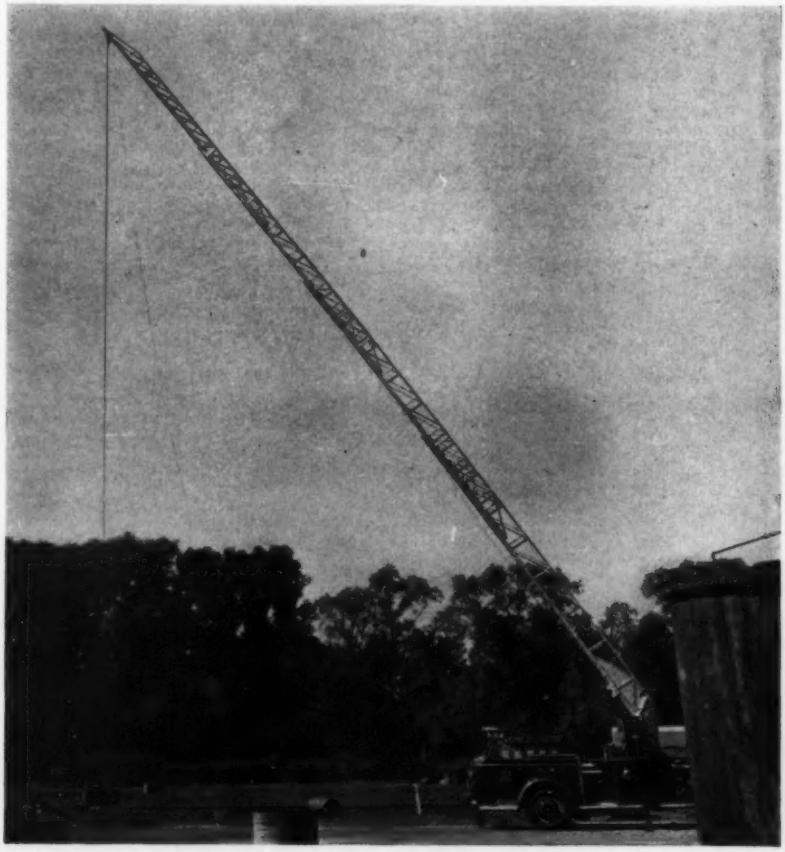


Fig. 5. Ladder, Cable and Tank during Ladder Test.

CHICAGO FLASH FIRE KILLS SIX IN CONVERTED HORSE SHED

Twenty-Five-Foot Square Shack Housed Ten Negroes; No Permit Secured for Conversion

By Paul C. Ditzel

AN explosion followed by a flash fire tore through a twenty-five foot square shack on the West side in Chicago, Ill.

Six persons, all Negroes, were killed and two other Negroes who were asleep in the shed suffered third degree burns all over their bodies and were not expected to live. Of 10 persons in the one-story frame building, once a horse stable, only two persons escaped unharmed.

According to the Chicago Building Department and Chicago Fire Department officials, the shed was inspected by the fire department on August 10, 1949, and all fire regulations were found enforced. No one was living there at the time of the fire inspection. On April 26, 1949, the building inspector's department thoroughly inspected the place and they also found it uninhabited.

No Permit Secured

Shortly after the August inspection, the owner of the property converted the building into living quarters separated by three-eighth inch gypsum board. There were four rooms in the building, one toilet, and no bath. According to Roy T. Christianson, Chicago building commissioner, no building permit of any kind had been issued by the city to allow the changeover from a stable and shed to a home accommodating 10 persons.

Fire department records show that Engine 18 and Hook and Ladder 5 responded to 1143 West Washburne Street on a still alarm of fire at 8:55 a.m. October 3. The still was given by the Downtown Fire Alarm Office over the department's loudspeaker system. The Chief of the Seventh Battalion followed Engine 18 and Truck 5 to the location.

All three pieces were quartered at 1123 West Roosevelt Rd., less than a block away from the fire. The fire building was practically in the rear of the fire station.

When Acting Chief Frank Kelly arrived he found a shack completely involved at the rear of a three-story brick tenement building at 1143 West Washburne Street. Only about two feet of space separated the shack from the tenement building.

Chief Kelly ordered Engine 18 to lay two 2½ inch lines from the fire to a hydrant down the street. The lines were stretched through a vacant lot to the east side of the fire building.

Truck 5 began ventilating the shack but couldn't gain ready access to the place because of the intense heat and heavy smoke. Engine 18 worked one of its lines through an open front door on the south side of the building. The south side faced onto an alley.

Chief Kelly told a Cook County Blue Ribbon Coroner's jury that his men got water on the fire not less than 2½ minutes after the alarm was received. Two big lines were sufficient to knock the fire down and Chief Kelly did not have to call for help by ordering the balance of the first alarm assignment.

When firemen of Truck 5 chopped through a wooden door on the north side of the building they found the bodies of three children. The door had been bolted from the inside and the children were not tall enough to reach the lock.

During their investigation following the blaze, fire officials said no stoves were burning in the building. They theorized the fire originated in the southeast room of the building where the fire was most intense and there was the greatest amount of charring. All who were in the southeast room were killed.

Apparently one of the persons in this room poured kerosene from a five gallon can into a hot blast stove. There were an explosion which blew out the bottom of the can. In the excitement that followed, the can was thrown across the room and landed on top of a double bed which ignited. Official fire records, however, list cause of the fire as undetermined.

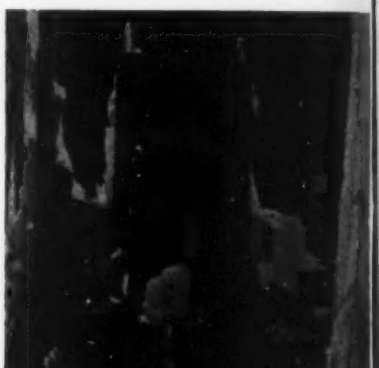


Photo by Paul C. Ditzel

Interior of a 25-Foot Square Horse Stable Converted Into Living Quarters for Ten Persons in Chicago. When One of the Persons Apparently Poured Kerosene in the Stove Pictured Above, an Explosion and Flash Fire Resulted. Photo Shows Southeast Room in Which the Fire Was Centered

The building was of wood frame construction with a flat tarpaper roof. Asphalt siding covered part of the outer walls. There were three doors in the shack. It had no basement but was built on the ground level.

One of the two persons who were fortunate to escape the explosion and fire told the Blue Ribbon jury that he had seen a five gallon kerosene can used to give stove fires in the shed a "boost." He identified the burned can as the one he had seen.

The owner of the shack and also the tenement house in the front of it told the jury he had given a contractor the go-ahead to rebuild the shack. He declared he assumed the contractor had attended to all the legal details in doing the work. He said he collected $6 a week rent for each of the rooms.

Most of those in the building were asleep when the explosion and fire occurred. Several of them worked night shifts until 3 a.m. None of the 10 was able to give the alarm. The alarm was telephoned in by a resident of the front tenement house after her children ran in to tell her the shack in the rear was on fire.

Converted Horse Stable in Which Six Persons Died in an Explosion and Flash Fire in Chicago. Four of the Dead Were Children, Three of Whom Could Not Reach a Bolt on a Door Which Might Have Lead Them to Safety

IOWA STOCKYARDS GET NEW FIRE PROTECTION IMPROVEMENTS

Fire Towers and Deluge Guns a Feature in the Sioux City Yards Modernization

A Staff Report

STOCKYARDS have in the past been classed as a top fire hazard. Fires in such occupancies have caused heavy losses in the last few years.

What is believed to be the first extensive, comprehensive effort to improve these conditions is found in the continuous program of modernization being carried on at the Sioux City stockyards under the direction of Chief Chas. B. Kuhl of the Sioux City Fire Department.

These stockyards are recognized as one of the leading markets in the nation and the yard embarked upon an expansion and modernization plan about five years ago, which has involved expenditures of about half a million dollars. Much of this investment has gone to improve the fire protection facilities.

One step, unique in such occupancies, is the substitution of tubular aluminum for wood in the gates of the pens. Not only does this metal reduce the fire hazard, but it gives utmost protection to personnel and livestock from bruises, cuts and splinters. By the end of this summer, the Sioux City stockyards will have approximately 500 of these gates installed.

Equally modern, and of more interest to fire protection engineers, are new fire towers, twenty of which are being installed in the open-pen area of the stockyards. They are considered a big step forward in fire protection for such hazards.

These towers are built of masonry, and on top of each is mounted a Wooster deck gun. From the height 16 feet above the ground, water can be directed in volume to any spot within a 300-foot circle.

With these stations located in overlapping positions, a fire in any one section of the open-pen area could be reached and well covered with water from three of these monitors at one time. If necessary, the entire open-pen area can be drenched with water.

Photo Courtesy "Farm Weekly"

One of Twenty Towers Being Built in Sioux City Stockyards. On Each Is Mounted a Deck Gun. Fire Hose May Be Stored in Each Structure, Ready for Use.

Each of these stations is equipped with an alarm device which signals the Sioux City Fire Department and the stockyards power plant, bringing in city water at approximately 100 PSI in 42 seconds from the time the alarm is set off.

Another feature is that complete protection is provided the operator of the monitor who can, if necessary, at the last minute shut himself inside the tower and wait out the fire.

It is said the Sioux City market is at present the only one in the nation equipped with these fire towers which are features of the long range fire protection program undertaken by the market. This program also includes the substitution of aluminum for wood in the mangers and gates, and the use of concrete pens, flooring and posts.

New Stations for Los Angeles County

Additional fire protection for Los Angeles County, California, is indicated by the recent announcement that the George W. Carter Company will construct several new fire stations in unincorporated areas just outside the Los Angeles city limits.

Spence D. Turner, Chief Engineer of the Los Angeles County Fire Department, in announcing the transaction, said that the Carter Company has already started construction of two stations in the El Monte area, and is ready to start a third near El Segundo Boulevard and Western Avenue. Other stations are planned at various locations throughout the County.

Financing and construction will be handled by the Carter Company, contractors and developers. The County has arranged for ten-year leases on each of the structures. At the conclusion of the lease period, the County will automatically obtain title to them without any additional outlay of cash.

This method of financing, Chief Turner points out, makes possible badly needed stations at least five years before enough tax money could have been accumulated for them. It also will mean an early reduction of fire insurance rates in the areas where protection is being improved.

Each fire station will be one story in height and contain an apparatus room, work room, sleeping quarters, kitchen, dining area and recreation room. Of contemporary design, each will be of frame and stucco construction. Front elevations will have vertical redwood siding and brick planting boxes.

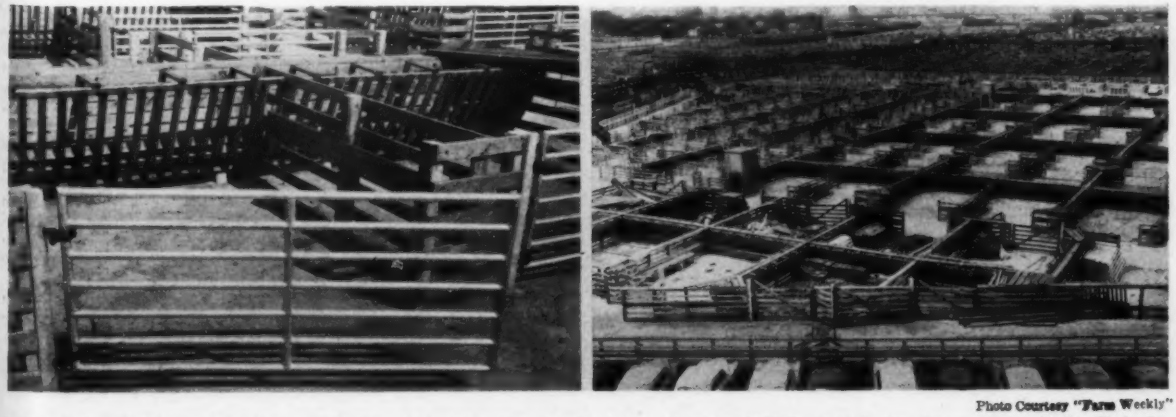


Photo Courtesy "Farm Weekly"

Left: Tubular Aluminum Gates Reduce Fire Hazard at Sioux City Yards. Later, Aluminum Will Be Used in Pen Construction. Right: Bird's Eye View of Sioux City Stockyards. Several of Fire Towers May Be Seen.

BIG WAREHOUSE FIRE INVOLVES THIRTY STORES AND DWELLINGS

Sparks Ignite Five Homes and Damage 23 Other Stores and Homes; Loss, $310,000

By Paul C. Ditzel

A FOUR-ALARM fire galloped through a century old four-story brick warehouse in Buffalo, N. Y., the past summer causing $310,000 damage. Before the flames were brought under control, sparks from the blaze ignited five nearby dwellings and damaged 23 other stores and homes.

It was Buffalo Fire Commissioner Harold R. Becker's first fire of conflagration proportions since he was appointed commissioner early this year.

The ruined building at Oneida and Lord Streets on Buffalo's East Side was erected 100 years ago and housed a chair factory. Later the Buffalo Starch Works occupied the building for the manufacture of soaps and chemicals. Twenty-five years ago a used machinery company purchased the building. Commissioner Becker said he believes oil-soaked floor timbers from the machinery business helped cause the rapid spread of flames.

The operator of the used machinery outfit later was found dying from malnutrition in the building. The warehouse then was purchased for $18,195 in February, 1947, at a public auction by a delivery truck concern. The head of the trucking concern was informed the building was not in particularly good condition.

Block-Long Structure

The building was once a block-long structure. Several years ago the center portion collapsed. When this debris was removed a paved parking lot, 100 feet wide, was installed, thus slicing the building into two parts, an east end and a west end. The parking lot was used by the delivery company for storage of trucks.

The east end of the warehouse was completely leveled. It was occupied by the William Simon Brewery Company of Buffalo which stored beer cases there. The west end, owned by the Raz Delivery Company of Rochester, N. Y., was used for storing freight. It was undamaged. Only damage suffered by the Raz Company was a truck trailer which was crushed when the west wall of the burning building collapsed.

First notification of fire came at 9:36 p.m. on June 27, 1950, when the Fire Alarm Office received a signal from Box 829 at Oneida and Lord Streets. Box 829 is close to the fire building.

Three engines, two hook and ladders, and two battalion chiefs responded on the initial alarm. Battalion Chief Warren J. McMahon radioed for a simultaneous second and third alarm three minutes later at 9:39 p.m.

Seven pumpers, three ladder companies, an auxiliary wagon, a battalion chief, and Deputy Commissioner James Forehead turned out on two and three bagger. Commissioner Becker also rolled when notified of the fire.

Meanwhile, the chief of the second battalion responded to the fire alarm office and took over as acting fire commissioner, according to standard Buffalo fire alarm precedure.

At 9:47 p.m. Chief McMahon radioed for an additional four engine companies. When Commissioner Becker reached the fire ground at 10 o'clock he radioed in the fourth alarm. The four engines already called by Chief McMahon took in the scheduled fourth alarm assignment.

Six minutes after he radioed in the fourth alarm, Commissioner Becker put in a special call for four more engines, constituting a fifth alarm, although Buffalo's assignment cards do not schedule fifth alarm turnouts. At 10:39 o'clock, Deputy Commissioner Forehead called for a light wagon to illuminate the smoke-heavy scene.

More than 15 big lines were laid in an attempt to hold the racing flames. But flames swept the building with such speed that within an hour after the fire's discovery the top walls of the four-story building had collapsed down to the second story. An hour later only the first-story walls and a three-story portion on the southeast and northeast corners still stood.

When Commissioner Becker arrived at the fire he ordered firemen to hold their nozzles straight toward the sky, creating a rain-like effect to protect the greatest possible area of homes with the water available. Two engine companies patrolled surrounding streets to wet down sparks on roofs. Homes around the building were mostly of wood frame construction and if more were ignited, could easily have sent the fourth alarmer into a blaze of unleased fury.

Nearby Roofs Ignited

Roofs of five nearby homes were ignited by sparks and caused families living inside to flee. Commissioner Becker estimated damage at $10,000 to the damaged buildings. Sparks damaged 25 other stores and dwellings.

As the warehouse walls collapsed, sparks showered an area of five blocks around. Residents quickly pulled garden hoses from storage places and began wetting down their homes.

Heat from the blaze was so intense that firemen were forced to cower behind trailers parked in the lot next to the warehouse as a shield behind which they operated their lines.

Flames spiralling 150 feet into the sky illuminated the entire area as if it were in daylight, and attracted thousands of spectators who were held back by 55 policemen. Some of the policemen went from house to house arousing occupants and evacuating houses on streets surrounding the fire.

Midway during the fire the southerly wind prevailing at the time shifted suddenly to an east wind. Firemen were forced to take hurried precautions against the heat radiating and igniting homes on the lee side of the fire building.

As the front of the warehouse crumpled, electric and telephone wires were showered with bricks and debris. Several blocks were plunged into darkness as the power was knocked out. Fremen were jeopardized by the fallen live wires until linemen cut off the power.

Toward the end of the fire not even the powerful lights of the auxiliary wagon could pierce the dense smoke which began to roll from the ruins. The blaze was brought under control at 11:30 o'clock, nearly two hours after the first alarm was sounded.

The following day five engine companies and two hook and ladders still wet down the ruins and went through the nasty job of overhauling. Streets in the vicinity were barricaded as workmen began clearing away tons of bricks and debris. Niagara Mohawk Power Corporation linemen restrung electric wires.

Damage Over $300,000

Commissioner Becker, in making his breakdown of the fire loss, said $250,000 damage was caused to the warehouse, $50,000 for contents, and $10,000 damage to dwellings to which the fire communicated.

Detective Sergeants Charles J. Haggerty and John C. Golembeck of the police arson squad worked with Battalion Chief Leo J. Considine of the Fire Prevention Bureau in an attempt to learn the cause of the fire.

They attempted to locate a neighborhood woman who told a fireman she chased a gang of boys from the warehouse an hour before discovery of the fire. She said the boys had ignited a bonfire in the warehouse but made them extinguish it before they left.

Repairs Ordered by Building Department

Officials of the arson squad and the Fire Prevention Bureau said they had received complaints within the past year from residents of the neighborhood that the building was unsafe and a firetrap. On May 9, the director of buildings notified the trucking company that they must make repairs. Shortly thereafter the president of the trucking company announced he had signed a contract to renovate the building.

Despite the intensity of the blaze and the falling walls, there were only three minor injuries. Two firemen attached to Hook and Ladder 3 were burned while moving the apparatus from near the west wall of the building just before it collapsed. They were treated by an Emergency Hospital ambulance physician for first degree burns on the hands and face and returned to duty.

Commissioner Becker commended the pair for "exceptional heroism in saving a hook and ladder truck."

A 19-year-old citizen, helping firemen move a hose line in the early stages of the fire, suffered first degree burns on the forearms. He was treated at the Emergency Hospital and released.

The Salvation Army's mobile canteen served hot coffee to firemen and police during the blaze.

In addition to the 18 engine companies, five hook and ladders, and auxiliary wagon which responded, six engines, and two hook and ladder companies changed quarters on orders of the fire alarm office.

Following is a resume of the alarms and the equipment involved:

9:36 p.m. Box 829, Oneida and Lord Sts. Engines 5, 32, 3; Hook & Ladders 5, 3. B.C. 6, 3.

9:39 p.m. Combination 2-2 and 3-3 alarm called by radio from Chief McMahon of the 6th Bn.
2-2 assignment: Engines 27, 12, 4. Hook & Ladders 11, 15. Aux. 1, Deputy Commissioner Forehead. Second Battalion Chief to fire alarm office.
3-3 assignment: Engines 35, 18, 21, 1. Hook & Ladder 6; First Battalion Chief.

9:46 p.m. Signal 1234 transmitted. (Companies will cease automatic covering in.)

9:47 p.m. Special call by radio from Battalion Chief McMahon for 4 engines to Box 829. Engines 8, 9, 22, 13 sent.

9:49 p.m. Truck 9 to Truck 11.

9:49 p.m. Eng. 34 to Eng. 27.

9:50 p.m. Eng. 15 to Eng. 32.

9:55 p.m. Eng. 36 to Eng. 1.

10:00 p.m. Box 829 4-4 requested by Commissioner Becker. Alarm office did not transmit as 4-4 assignment already on way.

10:03 p.m. Truck 13 to Truck 5.

10:03 p.m. Eng. 28 to Eng. 22.

10:06 p.m. Special Call from Comm. Becker for 4 more engines. Engs. 31, 16, 36, 15 sent.

10:11 p.m. Eng. 24 to Eng. 1.

10:13 p.m. Eng. 30 to Eng. 32.

10:39 p.m. Dep. Comm. Forehead called for Light Wagon.

Dallas 5-Alarm Lumber Fire

The first 5-alarm fire to strike Dallas, Tex., since January 10, 1947 (incidentally, that occurred also in a lumberyard), gave the city's fire fighters under Fire Chief C. N. Penn plenty of action and some anxious moments as radiated heat threatened nearby occupancies.

The spectacular fire, which was clocked at 3:30 A.M., fed on stocks of seasoned pine lumber in three lumber sheds of the Davis-Johnson Lumber Company, 2005 South Beckley Ave., and involved also the office and five big trucks of the concern. The large yard was packed with stock and the owners report the entire plant had recently been remodeled. The loss was set at approximately $100,000.

Intense heat hampered the work of the fire fighters, responding on five alarms. Paint on homes in the residential neighborhood was blistered. Panes of glass in nearby houses cracked from the heat. The fire was confined, however, to the big lumber yard covering most of a city block in the Beckley-Louisiana Ave. area. According to Chief Penn, it was one of the hottest and most difficult fires to fight which he had encountered in five years.

By hard work, firemen kept the flames from extending to the built up residential area in which the yard was located, saving a planing mill in the rear of the property. Some lumber also was salvaged.

The cause of the fire was not discovered. It was first reported by an Oak Cliff taxicab driver. He called his dispatcher by radiophone who, in turn, notified the fire department. About the same time, a news delivery boy saw flames while a block away from the yard, and awoke ocupants of a nearby residence, to telephone an alarm to headquarters.

All off-duty firemen were summoned to the struggle. Ten pieces of fire apparatus and two other fire department vehicles responded on the alarms, turned in in rapid succession.

Dallas Lumberyard After the Fire

FIRE ENGINEERING *acknowledges the cooperation of contributor Linwood J. Martin, of the Dallas Times-Herald, in supplying material on which this account is based. Mr. Martin also took the photographs.*

Arsonists Go to Jail

Two South Norwalk, Conn., men and the proprietor of a drug store at St. Johnsbury, Vt., were sentenced to prison or jail terms on August 4 in connection with a fire on October 2, 1948, in the drug store.

Raymond DeForest, of South Norwalk, who had pled guilty to a second degree arson charge, and who served as the State's star witness, was sentenced in Municipal Court, St. Johnsbury, to serve from 13 months to three years at hard labor at the Windsor State Prison.

Bertram Bixby, also of South Norwalk, a nephew of DeForest, was sentenced to serve from 3 to 10 months in the St. Johnsbury Jail. He had previously pled guilty.

Michael H. Teitle, proprietor of the drug store, who was convicted by a County court jury on August 2, was sentenced to serve from 3 to 5 years at hard labor. Teitle's attorneys secured a stay of sentence pending an appeal to the Vermont Supreme Court. He was released on $10,000 bail pending action on the appeal.

Judge Benjamin H. Hurlburd, in sentencing Teitle in County Court, told the defendant that he was lucky he was not facing a death sentence as Vermont law provides for such a sentence in a case of first degree arson. Teitle had been charged with, and convicted of, second degree arson.

Principal witnesses for the State were DeForest and Bixby. DeForest had been an employe of Teitle and a tenant in an apartment over the drug store. Bixby had lived in the same apartment. Teitle's conviction on the arson charge followed civil action brought by him against an insurance company, in which he was awarded $12,000, as damages from the fire. The verdict against the insurance company was upheld early this year by the Vermont Supreme Court.

TOM MAGNER.

Cover Picture

Dallas Lumberyard at Height of Fire.

October was a busy month for firemen in every category (municipal, state and federal) who were called upon to battle raging rural and suburban area fires in field and forest. Some of the more threatening of these blazes occurred in the San Diego, Cal., rural areas.

On Oct. 14, a deliberately set fire was whipped by fickle winds through a rural resort south of Julian, near that city, burning seven cottages valued at about $6,500 each and destroying choice pine and oak timber. Over 2,000 acres were blackened, while residents of surrounding areas were alerted, and more than 200 fire fighters from the U. S. Forest Service and State Division of Forestry operated jointly with volunteers as fire straddled both state and federal lands, to control the spreading flames.

This was but one of numerous rampaging fires. Another, which roared up a brush-covered hill in Rose Canyon on

Demonstrating the Quayle Nozzle at New York Pier Fire Test

the edge of San Diego brought three city fire companies into action, together with volunteers who controlled the threatening blaze after a ten-hour struggle. The cover illustration of this issue shows fire fighters getting to work on this blaze to protect exposed dwellings, typical of the area.

New York Stages Pier Fire Fighting Demonstration

An alarm of fire was turned in via A.D.T. box, on Pier 92, North River, Manhattan, September 20, 1950, with the full approval of city and the fire department officials who openly "aided and abetted."

Present also, as witnesses, were scores of delegates to the International Municipal Signalmen's Convention, in session that week at the Hotel Commodore, a large aggregation of visiting chiefs, fire insurance rating board officials, fire prevention engineers, newspaper men and fire buffs.

While cameras flashed, City Commissioner of Marine and Aviation, Edward F. Cavenaugh, Jr., snapped the A.D.T. pier box at 10:30 a.m. Slightly over a minute later the whistle of Engine 2 (no sirens in the N.Y.F.D.!) was heard and within a minute or two more the full alarm assignment of four engines, two ladder trucks, deputy and battalion chiefs, and searchlight rig 24 were in operation. Soon after, the fireboat Duane and the Marine Division Tender "Smoke," with Deputy Chief of Department Holian, in charge were at the pierhead.

Purpose of the demonstration was to test out new techniques, involving new protective features and equipment on the city's piers. The pier selected for the show was located at West 52nd Street, just upriver from that at which the liner Normandie burned and capsized. It is one of those recently remodelled to embody fire safety features developed by the New York Fire Department.

Of course the stage had been set for the event. As the Commissioner sent the alarm, several firemen, who had been quietly inconspicuous until then, touched off smoke bombs in small round holes located in the pier's thick concrete floor. Metal covers were then replaced over these openings. Realistic puffs of smoke were curling upward as the first fire companies pulled onto the pier.

While the top brass of the several city departments and the small army of spectators observed carefully, the waves of fire fighters went swiftly and seriously to work. Engine 2's pumpers connected to the pier standpipe system, at bulkhead, while its hose tender laid out the first line. Engines 56, 40 and 23 took suction off the pier. Ladders 4 and 35 remained at bulkhead, their crews carrying out tools to "open up." Lines were stretched to numerous of the small openings and special distributor nozzles attached. Of these the most interesting to the watchers was the new Quayle nozzle, named after Fire Commissioner Frank Quayle, which is so designed as to discharge a heavy spray vertically as well as laterally after the line is dropped to the right depth through the pier aperture. As the pier took on the smoke charged resemblance to an actual heavy fire, Searchlight 24 went into operation. The dramatics of the moment were further heightened when the overhead pier sprinkler system was turned on and a young Niagara descended over a supposedly burning area.

By 10:30 the simulated fire, which supposedly had been burning in the piles and under pier structure, was considered out.

The main factor of the test, it was explained, was the series of small openings in the deck of the pier. Without these openings, which are new to New York's pier structures if not so new to some other seaports, it is virtually impossible to get at a fire burning in the pier substructure. Lack of such openings were chief contributors to the costly and serious fires in the Cunard, Grace and other piers.

Fire department officials explained that 175 small apertures had been cut through the floor of Pier 92 at regular intervals as part of the safety remodeling recently done. These openings are so arranged that they can cut off the pier horizontally, and there are sufficient of them so that they will not all be covered by cargo, even should pier workers be careless in their cargo handling. In addition to these openings for fire department nozzles, concrete fire walls have been built along the pilings and a sprinkler system installed.

These improvements are said to be in order for some 112 city-owned piers as a result of safety studies made following the Grace Line Pier fire. Cost of the safety improvement program, according to Commissioner Cavenaugh, will exceed $4 million.

N.B.F.U. Issues Report on South Amboy Disaster

Calling attention to the growing danger of port explosions as the shipment of military supplies to various parts of the world increases, the National Board of Fire Underwriters recently released its engineering report on the South Amboy, N. J. ,munitions exposion. This disaster occurred May 19, 1950, with a death toll of 31, and a property loss estimated at more than $7,500,000.

Recommendations are made in the report which are intended to prevent such port explosions and reduce confusion such as followed the South Amboy blast.

At the same time as the report was released, the National Board's Committee on Adjustments announced that it has closed its supervisory office which was opened soon after the blast in Perth Amboy under its "Catastrophe Plan" to expedite handling of claims. To date, 7,760 claims have been processed by this office, with loss payments totalling $3,959,855. Several large claims are still being adjusted.

Although the cause of the explosion of four transfer lighters and several railroad cars loaded with 420 tons of explosives has not yet been determined, the research report lists seven possibilities. These are:

1. Explosion of detonating fuses of anti-tank mines during loading operations.
2. Explosion of an engine in one of the lighters.
3. Fire in one of the lighters.
4. LP gas explosion in a cooking stove aboard one of the lighters.
5. Sabotage of the cargo.
6. Spark from a nearby phosphorous plant smokestack.
7. Lightning striking the cargo.

The report says that because complete enforcement of Interstate Commerce Commission and the Coast Guard regulations has not always been possible, due to the limited personnel of these agencies, legal safeguards at the state or local level are necessary.

It recommends the creation of a port security officer or port warden for such ports as South Amboy. The port warden's chief concern would be preservation of life and property on the waterfront.

The Underwriters report also suggested that a conference should be held by responsible authorities and transportation interests to determine which ports are suitable for shipping explosives. More frequent safety inspections of explosives shipments should be made during manufacture, assembly and loading operations. Carefully planned transportation schedules should be established for all shipments of explosives.

An educational program for training all persons engaged in handling and transporting explosives should be undertaken as a cooperative job between

the government and transit authorities, and organized labor groups, the report said.

Noting that the South Amboy disaster was a study in disaster preparedness, in which the citizens "stood up remarkably well throughout their ordeal," the National Board report called for advance blue printing of all equipment and regional emergency facilities to deal with enemy-caused as well as natural and man-caused catastrophies.

The report was prepared by the Research Division of the National Board of Fire Underwriters and was issued as a joint effort of the National Board and the Fire Insurance Rating Organization of New Jersey.

Simultaneous Fires Require All Waterbury Apparatus

Three firemen, including Fire Chief Francis T. Scully, were injured, and damage estimated at $300,000, wrecked the four-story brick Armour & Company meat packing plant at 594 West Main Street, Waterbury, Conn., on Sept. 25.

Fireman Charles Luddy, attached to Headquarters, suffered a back injury when he slipped and fell from the shipping platform roof, a distance of 25 feet. Chief Scully fell about six feet from the loading platform on the Commercial Street side of the structure and received a back sprain. He was given medical attention and later returned to the fire. Lieut. John Murphy sustained a broken right wrist while fighting the blaze.

The fire, a blazing inferno, brought out practically the entire Waterbury Fire Department. The top two floors of the building were completely destroyed. The roof over the front of the building on the West Main Street side collapsed. The two bottom floors escaped with little more than smoke and water damage.

The stock, which included meats, provisions, canned goods and other supplies, are a total loss, either from the heat of the fire or by water. Valuable machinery, worth about $25,000, dropped from the fourth floor to the second when the fire was at its height. The top floor was used for a sausage factory, where frankfurters, sausage, cold cuts and the like, were processed. The other half of the fourth floor was used for dry storage of soap, soap powders and supplies.

The third floor was used for storage of canned goods, industrial soaps and powders such as are used by laundries, and quick freezers for meat cuts and poultry, canned hams and other foods.

On the second floor were freezers for meats, lard and other supplies. This floor also housed an egg-candling room and dry storage. On the ground floor was a large cooler for storage of sides of beef and lamb. There were 30,000 pounds of meat in this cooler. The main floor also housed offices of the managers and other employes.

The fire was discovered at 3:46 A.M. by Police Officers Paul Salvatore and Joseph Murphy, who were cruising in a radio car nearby. They immediately radioed an alarm to Fire Headquarters. Operators sent Engines 8, 10, Truck 1 and an Emergency Car to the scene, along with Deputy Chief James McDonald. At 3:50 A.M. an alarm was received from Box 371, which called out Engines 2, 6 and 9, and Truck 3. Chief Scully and Deputy Chief Frank Moore responded on this alarm. At 4:13 A.M. Chief Scully ordered Engine 3 to respond.

At 4:26 A.M. another alarm was radioed for additional help, which brought out Engine 1. At 5:08 A.M., on another radio call, Engines 4 and 11 responded. Truck 2 was called to the scene at 5:11 A.M., making nine of the 11 engine companies and the three truck companies in service at the fire. Engines 5 and 7 were the only companies in quarters to cover the city.

Firemen attacked the fire with 10 lines of 2½-inch hose, which included lines from deluge sets and ladder pipes. The pressure throughout the fire was 80 pounds at the hydrant, and 200 at the pumpers.

While firemen were fighting the Armour fire, Engines 5 and 7 responded to Anna Avenue to extinguish a blaze in a sofa. Firemen said it was the first time in 32 years that every piece of fire apparatus was out of quarters at one time.

The Eastern Color Printing Company, adjoining the garage in the rear of the Armour plant, housed a number of rolls of newsprint. At the height of the fire, the water curtain system of the printing company was turned on for protective purposes. Five large Armour trucks and three commercial cars were moved from the garage as fire threatened that section. Recall was sounded at 6:10 A.M.

TOM MAGNER.

New York's Training Program

The Bureau of Fire Mobilization and Control of the Division of Safety, New York, has reported on its state fire training program. During the year covered by the report, the following firemen were trained: Basic Course, 12,404; Intermediate Course, 4,543; Advanced Course, 1,529.

The Fire Training Program covers both the theory and practical phases of firemanship and the approximately 100 County Fire Instructors follow a detailed outline of instruction in the form of lesson plans which are based on the most progressive instructional practices available.

The Division conducts an annual County Fire Instructors Conference for the purpose of providing current technical information and new instructional techniques. Nationally recognized experts in firemanship serve as discussion leaders at these conferences. In addition, there are regional conferences held for the County Fire Instructors.

The Training Program, which is linked with statewide mutual aid plans, was inaugurated over a year ago by Governor Thomas E. Dewey, and is directed by the Division of Safety, headed by Thomas W. Ryan, Director, and B. Richter Townsend, Chief, Bureau of Fire Mobilization and Control. The program called for the appointment of a State Fire Advisory Board, representing all interests and branches of the fire service of the State; for six or more Field Men, who work with the State Fire Instructors throughout the State, and various specialists in the Division of Safety who prepare the training material and other aids to the program.

Since its inception, the program has resulted in the establishment of fire coordinators and advisory boards in practically all the counties of the State, which direct County training and mutual aid. More recently, these bodies have been concerned also with promoting civil defense.

Damage Estimated at More Than $250,000 Resulted from Fire Which Swept Through the Armour and Company Meat Packing Plant on West Main Street, Waterbury, Conn., on September 25. One Fireman Was Seriously Injured and Taken to a Waterbury Hospital

Ontario Fire Marshal's Office Adds Training Apparatus

A high point of interest at the Training Course for Municipal Fire Chiefs, of the Province of Ontario, Canada, held in Toronto, October 26-27 last, was the exhibition of the new pumping unit just accepted by Fire Marshal William J. Scott's Office of the Province for use in the training of provincial firemen.

Appearance of the pumper unit was not scheduled on the two-day agenda, but it took the spotlight nevertheless, being on exhibition during the sessions held in the Wallberg Building of the University of Toronto.

Of the 1000 reported municipal fire chiefs in Canada, 423 are located in the Province of Ontario. The training of the fire departments directed by these chiefs is now, under the Dominion Grants, being made to the fire service through the Marshal's Office, the responsibility of the latter. And in order to elevate that training to the highest possible degree, Marshal Scott and his assistants, working with the Canadian fire officials, have developed a comprehensive training program, which will ultimately include a complete Fire College with full training staff and instructors.

Not waiting until the Fire College is in a definite entity, the Fire Marshal's Office has purchased the first of several pieces of fire fighting and utility apparatus and equipment, to be manned by approved instructors of the Fire Marshal's office. Incidentally, some of these instructors have only recently completed exhaustive preparatory training to thoroughly indoctrinate them with the latest methods and techniques in fire protection and fire prevention. During the course of this training they attended the New York Fire Department's Fire School and Fire College, the Pump Operator's School in Washington, D. C., and visited the naval Training School in Norfolk, Va.

The new pumper is an adaptation from the regular 320 GPM fire pumper widely used in Canada. Mounted on a 3-ton chassis, it has been changed in accordance with ideas of the Fire Services Division of the Fire Marshal's Office to meet the special needs of a pumper for suburban and rural duties and also mutual aid between municipalities, plus civil defense. The changes from the normal specifications are:

1. Five-man fully-enclosed cab in which the entire crew can ride inside to and from fires, fully protected from all kinds of weather, and in which the crew could live temporarily if called out on civil defense expeditions.

2. Three-way short-wave radio (station to car, car to station, car to car) and also equipped with portable pack set (walkie talkie).

3. Two-stage pump which can be operated regularly from the hydrant or draught on 2½-in. and 1½-in. hose lines with straight stream or fog at pressures up to 250 PSI. and from booster tank with 1½-in. hose straight stream or fog up to 250 PSI or with high pressure (400 PSI at the pump) fog through two reels of ¾-in. rubber hose mounted on two reels with electrical re-wind.

4. Four hundred Imperial gallons water tank on the truck.

5. Three ten-foot lengths of suction hose.

6. Forty-five foot aluminum ladder carried overhead to reach barn roofs on rural fires instead of the usual 35-ft ladder.

7. Special gasoline-fuel heater to provide immediate (30 sec.) defrosting for windshield and also heating for the cab and pump as a separate unit independent of the truck engine.

This pumper first saw service at the International Plowing Match, at Alliston, Ontario the week of October 10 where the FMO had a large display in the Tent City, which extended over two miles and where the attendance ran as high as 30,000 persons per day. The FMO staff and apparatus provided fire protection for the Tent City and also gave daily demonstrations of fire fighting.

Another unit already added to the FMO is a Utility Truck, the first of two to be used in the training program.

Utility Truck Training Unit (Top) and New Fire Truck of Ontario Fire Marshal's Department.

Nassau Holds Sixth Annual Institute of Fire Officers

The sixth annual Institute of Nassau County Fire Officers was held October 23 and 24 at Hofstra College, Hempstead, L. I., N. Y.

The Institute is conducted under the auspices of the Fire Chiefs' Council of Nassau County and directed by a Committee of which Fire Marshal George W. Clough is chairman.

Lecturers in the two day sessions included: Harry A. Campbell, Chief Inspector, Bureau of Explosives; Thomas P. O'Brien, Deputy Chief of Department, in Charge Bureau of Fire Alarm Telegraph; John J. Tubridy, Chief, N. Y. Naval Shipyard; J. E. Hilton, Executive Director, National Automatic Sprinkler and Fire Control Association; J. E. Jagger, General Manager, International Association of Fire Chiefs; Louis E. Seley, President, Conservative Gas Corp., State Director L. P. G. Association. Motion pictures were shown and demonstrations were conducted by the N. Y. Telephone Co. There were exhibits of latest improvement in fire equipment and apparatus.

Virginia Has Successful State Fire School

The 1950 Annual Virginia State Fire School, sponsored by the State Fire Chiefs' Association in cooperation with the State Division of Trade and Industrial Education, was held September 11-15, in Norfolk, Va., at Fire Station 9. Host Chief was R. L. Woolard, of Norfolk. A most successful school was reported.

The four-day sessions included a dozen lectures on pertinent fire control and extinguishing subjects, together with demonstrations and drills involving basic fire fighting evolutions, under the direction of chief officers of the Norfolk Fire Department. Some emphasis also was placed on "teacher training."

The certificates, issued by the State Department of Education, were awarded at the banquet on Friday, September 15. Full attendance was required for certification. Special rates were provided school enrollees by local hotels. Director of the school is Fire Marshal Clay A. Easterly of Martinsville. Captain Clyde O. Peters of Lynchburg is secretary.

Bay City Department Embarks on Rehabilitation Program

Another city to evaluate its fire department in the light of modern fire hazards and needs is Bay City, Michigan. In December, 1949, Mayor Elford Cederberg of that municipality appointed a Citizens Committee to study the local department with a view to making recommendations for its rehabilitation.

Such committees are not new, but they do not always include persons with a proper understanding of fire protection and fire prevention, and the part the fire forces must play in such municipal endeavors. Bay City, however, included in its study group five men, including the chairman, who are members of the "Buff Club of Bay City," the active band of fire buffs who know the fire department and have its interests, as well as those of their community, at heart.

Included in the committee are a physician, a lawyer, two bankers, a druggist, one utility executive, a real estate broker, two manufacturers and a retail merchant.

This representative group included in its study:

1. Relocation and alteration of present fire stations.
2. Contracts for out-of-city properties.
3. Fire apparatus.
4. Personnel of the department—pensions, seniority and retirements.
5. Underwriters' recommendations on communication system and distribution.

Bay City's City Commission has already accepted one part of the Committee's report made to date—that relating to new apparatus. Contracts have been let for three 1,000 GPM pumpers, one 100-ft. aerial ladder truck and one high pressure fog truck.

This new equipment will replace various pieces of antiquated trucks now in use. Several 35-year-old pumpers will be retired from service.

Subsequent reports and recommendations will be made to the City Commission by the Committee as they are completed.

Boys Start Two Large Fires

Two boys, six and seven years old, admitted to setting the second two-alarm fire in 12 hours at Milford, Conn., a blaze that left a two-story wooden storage building, at 24 Lenox Avenue, a partial shell. Three members of the Milford Fire Department were injured fighting the spectacular fire.

Capt. Henry J. Galbonner, of the Milford Police Department detective bureau said after the fire that the juveniles confessed to igniting the storehouse because they "liked to play with matches" and the flames spread so quickly they were forced to flee for their lives.

Capt. Galbonner said the youngsters admitted a series of small fires in the building on Sept. 26, but these were extinguished quickly with minor damage. The boys told of piling up corrugated cardboard in the basement hatchway of the storage building, with each setting an individual fire. One burned itself out but the other blazed so quickly on the oil-soaked floor that the boys had to run to escape being trapped.

Fire Marshal Richard F. Coley said that damage is estimated at $31,000, with the building used only for the storage of eight new dories ready for sale, and an undetermined quantity of machinery and furniture. It was formerly a bowling alley and later occupied by the Novelty Tool Company.

The fire followed by eleven hours one which leveled two cottages and damaged three others in the Burwell's Beach section of Milford. Three firemen were injured in this fire.

The damage estimated in the two fires, some $68,000, exceeded the total fire loss in Milford for the entire fiscal year ending September 30. TOM MAGNER

College Aide Admits Setting Haven Hall Fire

A University of Michigan Latin teacher who said he had been "studying hard and not feeling well" admitted Oct. 11 that he set the fire that burned Haven Hall, U. of M. campus landmark on June 6, 1950.

Robert H. Stacy, 30, was charged with arson and jailed in default of $15,000 bond. According to authorities, Stacy attempted to leap down a stairwell from the 7th floor of a downtown Ann Arbor building after the warrant was signed.

Stacy, an overseas veteran of World War II, readily admitted his guilt. He had been undergoing treatment at the Veterans' Readjustment Center in University Hospital, at Ann Arbor. The fire, which destroyed a priceless library, caused loss originally estimated at over $1 million, and later set at $618,000.

Stacy was arrested on a tip from several persons who were in Prosecutor Douglas K. Reading's office on another matter. Following an all-night questioning and a lie detector test, Stacy confessed he set the blaze by touching a match to a roll of maps on the second floor of the old building.

A Graphic View of a Flaming Storehouse (Top) at Milford, Conn., on October 3 That Left the Building a Partial Shell. Two Youths Admitted Setting the Blaze Which Caused Damage Estimated at $31,000. It Was the Second Two-Alarm Fire in Milford in a Period of 12 Hours. The Other Fire (Bottom) Destroyed Two Cottages and Damaged Three Others

New Orleans Uses Motorcycle Side Car "Apparatus"

In an effort to reduce the unnecessary response of heavier and more expensive fire-fighting equipment, the New Orleans Fire Department, Chief Howard Dey, has installed a new "firecycle."

The "apparatus" is a large size motorcycle and side car, the latter equipped with two types of fire extinguishers (including CO_2), 300 feet of small hose and other equipment.

The unit, driven by a fireman, responds to automobile fires in the principal business district.

Judicious Use of Water Stems Stone Plant Fire

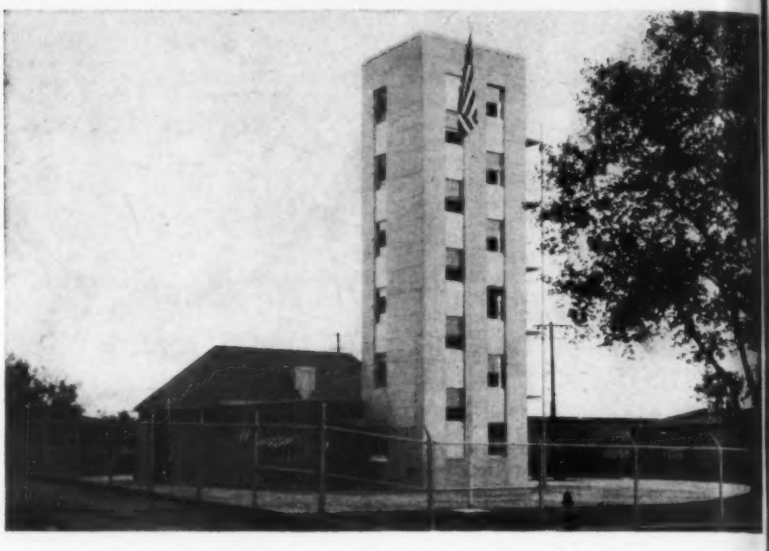
Prompt response and close cooperation between the Forest and Kenton, Ohio, Fire Departments last summer held losses to a minimum when fire involved the Herzog Lime & Stone Co., north of Forest.

The fire was discovered in the drier screen building, a 100 x 300 ft. structure, about 1:45 P.M., and was under control within one hour, although firemen fought it for three hours.

The building, of corrugated steel siding, roof and frame construction, contained machinery and stone, and firemen found it difficult to get at the fire in the combustible framework because of the stone storage inside.

Believed caused by an overheated belt on one of the conveyors, the fire ate its way through the building despite the work of firemen, who were handicapped by lack of water. At about 2:00 P.M. the latter summoned Kenton forces to aid and between the joint forces, the blaze was controlled before it could spread to other buildings in the plant.

Forest Fire Chief Morris Burk credited the use of 20,000 gallons of water, which Elmer Ropp of Forest hauled to the aid of the fire fighters, with helping control the blaze. The supplies hauled by his tanker were used by the Forest pumper to supply small lines operating directly on the fire. The Kenton firemen also pumped water to Forest apparatus, through an 800-ft. stretch of 2½-in. line. Loss was approximately set at $15,000.



General Exterior View of Dayton Drill Tower Looking Northwest

New Dayton Drill Tower a Monument to Training

The new Fire Training School and Drill Tower opened recently by the City of Dayton, O., with fitting ceremonies represents the "last word" in utility and appearance. It cost $107,000, and is considered worth it.

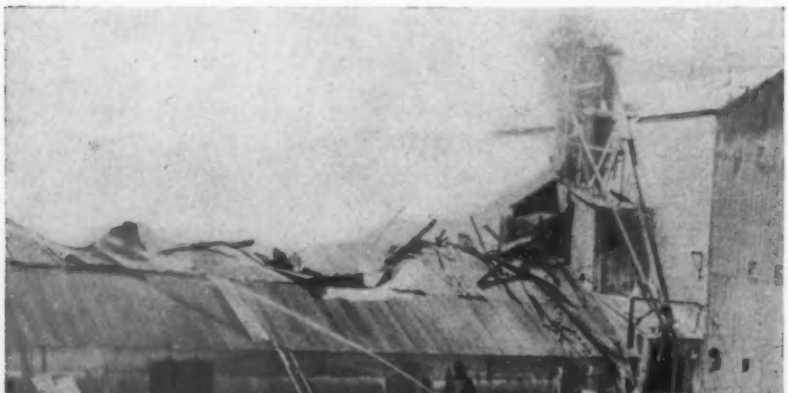
The six-story structure is constructed of concrete and brick masonry and was designed to meet the wishes of Fire Chief Joseph A. Kirby and his aides, who long have recognized the importance of firemanship training.

The new school building, which includes a modern and full-equipped firefighters' classroom, has four different types of windows so that firemen may become familiar with them; utility room for indoor training; class and assembly room; a smoke room for gas mask training, and other features, including sprinkler system, stand-pipe and other facilities requisite to modern fire training.

The opening ceremonies were attended by Dayton civic officials, and business leaders, members of the Dayton Safety Council and the Chamber of Commerce, with many visiting fire officials from throughout Ohio.

Speakers on that occasion were Mayor Louis W. Lohrey, City Manager Russell E. McClure, Fire Chief Joseph A. Kirby and Harry I. Schenck, the architect.

Forrest B. Lucas, Assistant Chief of the Dayton Fire Department, has long been active in firemen's training circles. He served as a member of the Joint Committee on Evolutions which has prepared two of the picture manuals on ladder and hose evolutions now being used by the fire service.



Prompt Response and Effective Cooperation of Both Forest and Kenton Fire Departments Kept Loss at a Minimum as a 100 by 300-Foot Corrugated Steel Siding and Roof Stone Drier Building Burned.

Paterson Clamps Down on False Alarmists

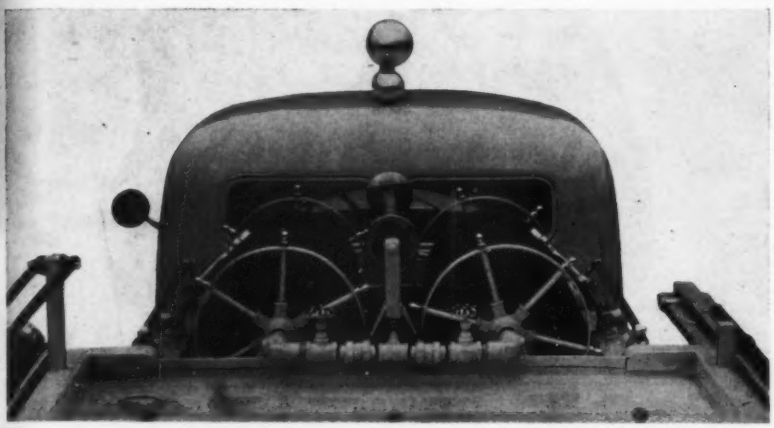
A twenty-six-year-old man was arrested and held in $100 bail in Paterson, N. J., recently. He was charged with sending in three false alarms on August 30. Battalion Chief Rudolph Peppinghaus entered the complaint after three false alarms were sounded from Signal Station 322, Matlock and Temple Streets. The first was sounded at 7:38 p. m., bringing Engine Companies 1, 5, 12, and Truck No. 2 together with a Deputy and Battalion Chief to the box. The other two false alarms were sounded from the same station at 8:05 and 8:57 p. m. Witnesses claimed that they saw the man send in the third of the three, and he was arrested by Patrolman Harold Clark.

RICHARD M. ADELMAN

News of the Manufacturers

Permanent, But Flexible, Pipe Fitting for Trucks

One problem in equipping new and re-built fire apparatus has been to secure proper fittings for joining pressure and suction lines. This is especially true in the piping of hose reels, which are subject to constant vibration caused by rough roads and operating stresses.



Black Circles Show Dresser Couplings in Piping on Fire Truck

In the past, wire-lined rubber hose with wide clamps was used on suction lines. Occasional replacement was necessary because of cracked and rotted hose. Some of these problems have been overcome by using what is known as the Dresser compression fitting. This equipment is shown mounted on a piece of Young Fire Equipment Corp. apparatus.

Installation of the compression Dresser couplings which combine the flexibility of rubber with the "wearability" of metal, are said by the apparatus manufacturer to result in overall savings in installation and material costs of up to 85%.

Other types of flexible compression fittings including tess and elbows are used in such places as suction lines and front-end mounted pumps, with resultant savings.

Brumbaugh Announces Expansion

The thirty-year-established Brumbaugh Body Co. of Altoona, Pennsylvania, reports that they are now expanding their line of fire equipment, pumpers, squad trucks, and emergency trucks, custom built to specifications on any chassis.

Their all-steel welded line of pumpers features Hale fire pumps in sizes from 200 to 1,500 gallons per minute capacities.

A 9-man-cab affords protection in all weather for at least 9 men, and provides accessibility for auxiliary equipment, with everything in its own individual compartment. Slide-out-racks make it simple to swing the portable equipment, pump or generator into action and a lift-up center seat provides access to the mid-ship pump. On the rear is a booster tank with a large opening for rapid filling. The cab is so designed that there is complete, unobstructed visibility on all sides.

Squad trucks and emergency trucks feature roomy compartments designed to house all types of equipment and built to specifications. In the longitudinal seats in the rear of the body, personnel is protected by a specially designed canopy. The equipment can be furnished with the canopy, if preferred, either open, semi-enclosed, or fully enclosed.

Sales manager in charge of Bruco Fire Equipment is Marty Bigelow. C. D. Brumbaugh is president and founder of the company.

Mine Safety Announces New Breathing Apparatus

A unique new life-saving apparatus for police and fire departments, ambulance crews, industrial plant safety and medical staffs, etc., was unveiled October 16 at the National Safety Congress in Chicago by the Mine Safety Appliances Company, Pittsburgh.

"An "automatic breathing instrument," the portable apparatus is used for victims of drowning, electric shock, poisonous or suffocating gases, heart attacks, overdoses of drugs or any kind of asphyxiation.

Called the "Pneolator," it consists of a rubber and plastic facepiece connected to two valves by two four-foot lengths of corrugated rubber tubing. One of the valves administers oxygen with positive pressure at regular intervals, cycling automatically. The other valve lets oxygen flow only when the patient inhales and stops the flow on exhalation. The valves are arranged so they interchange automatically, depending upon whether or not the victim is breathing.

The artificial respiration valve delivers oxygen at a pre-set pressure to the lungs of a victim whose breathing has stopped. When the proper amount of oxygen has been admitted into the lungs, the valve shuts off and lets the elastic walls of the lungs and the flexible muscles of the diaphragm and chest provide exhalation. The action is similar to blowing up a balloon and allowing air to escape by releasing the neck.

If the patient is breathing, the inhalator demand valve automatically admits as much oxygen as the patient can inhale. When he exhales the valve stops the flow until he again inhales. Mine Safety Appliances Company technicians pointed out that these two valves, together with a built-in aspirator tube to remove obstructions from the throat, make the apparatus suitable for any emergency affecting a person's breathing.

The pressure of oxygen administered by the cycling valve can be varied to meet a wide range of conditions. The pressure regulating valve gauge is calibrated to show pressures in terms of centimeters of water. The cycling valve can be set at the low range to admit a gentle five centimeters, approximately 1.2 ounces pressure per square inch. This low pressure would be used for newly born infants with extremely delicate lungs. High setting of the valve is 30 centimeters, or 7.2 ounces pressure per square inch. Such a setting could be used for a robust adult although the normal effective range to revive a victim of asphyxia is between 15 and 20 centimeters.

The unit is packed, ready to use, in a fiberglass carrying case that is strong enough to withstand the weight of an auto. In the case is a 22-cubic-foot tank

New Life-Saving Apparatus Introduced by the Mine Safety Appliances Company Is Demonstrated by Firemen. This Automatic Breathing Instrument Is Called a "Pneolator." It Can Be Safely Used, the Company Said, for Treating Victims of Any Kind of Asphyxiation

of oxygen, approximately enough for a half hour's use. The main valve connections, however, are arranged to permit attachment of additional oxygen supply from any outside source without disconnecting the regular tank. The entire assembly, with case, weighs approximately 41 pounds.

Automatic intermittent positive pressure breathing was first developed during World War II at the Aero-Medical Laboratories of the Air Force at Wright Field, Dayton, Ohio. The differential pressure instrument was designed to sustain breathing of injured airmen at high altitudes.

After the war, further development and manufacture of the instrument, known as the Pneophore, was undertaken by the Mine Safety Appliances Company to supplement its line of inhalators and oxygen therapy equipment. Because of the instrument's widespread use to maintain breathing of polio victims with respiratory arrest, it was nicknamed the "baby lung." It is used when an "iron lung" is not available or while patients are being moved.

The Pneophore has been accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association. The Pneophore uses the same automatic artificial respiration valve as is used in the new Pneolator assembly.

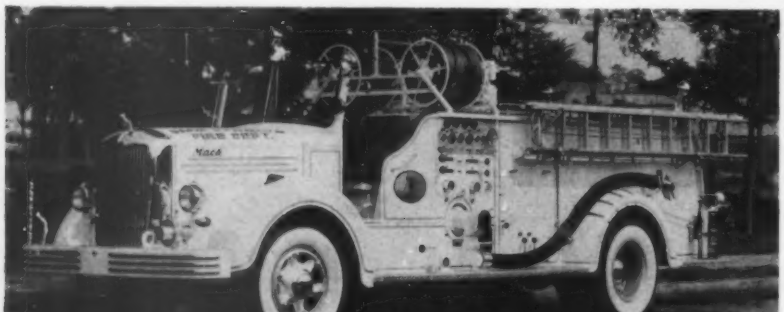
Palm Springs Takes the Palm for Smart Pumper

Fire Chief William Leonesic and his blaze beaters of Palm Springs, Calif., were in the limelight during the San Francisco Convention of the I.A.F.C. last month. So, too, was their new Mack pumper, which was on exhibition at the Mack booth during the conference.

One of the interesting features of this new apparatus were the white side-wall tires. Although not many fire fighters have stopped to consider why it is that fire apparatus generally has never sported white wall tires, the simple fact is that they have not been available in the size and quality demanded for such equipment. That is why the advent of white side-wall tires on the Palm Springs pumper received so much attention.

The unit pictured is the Mack Model 125, 1250 GPM Class "A" pumping engine. It has air brakes; 400 gallon water tank; 4-stage Byron-Jackson-Lawton auxiliary high pressure pump and two electric re-wind high pressure hose reels. The ladder equipment includes 10', 20' and 35' aluminum ladders.

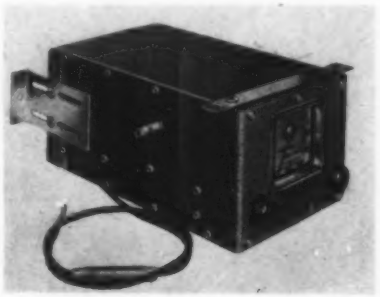
This, the third Mack bought by the Palm Springs Fire Department, was built to the specifications of Chief Leonesic of that city.



Palm Springs' New Pumper

New Mobile Radio

The Radio Apparatus Corporation, 310 Fountain Square Theatre Building, Indianapolis, Indiana, has recently announced production of a mobile F.M. radio reciever which brings in all two-way telephone communications.



New Monitoradio Introduced by Radio Apparatus Corporation

The new mobile unit is called *"Monitoradio."* There are two models—M-51 for the 30 to 50 megacycle band and M-101 for 152 to 162 megacycles.

Messages which Monitoradio picks up include: police calls, fire calls, railroad and bus signaling, hospital calls, border patrol signals, maritime messages, forestry and petroleum line trouble shooting. A specially designed whip antenna, Model A-101, makes it possible to receive within a ten-mile range. Model M-51 will receive clear signals from the average transmitted at a distance of 25 to 50 miles.

These units each have 5 tubes plus a rectifier and voltage regulator.

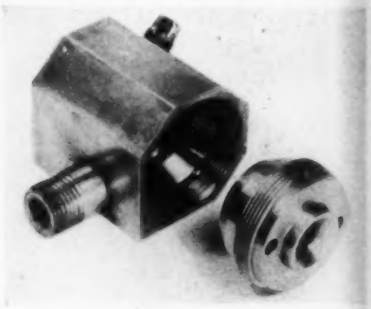
New Spray Nozzle

A spray nozzle developed by Midwest Research Institute, Kansas City, Mo., in co-operation with the Viking Corporation, Hastings, Michigan, is of interest to those who are concerned with the subject of fire control.

This apparatus is equipped to deliver an equal amount of spray over a wide surface with no blank spots or clogging. In addition, the same spray head can be adapted to produce a variety of distribution patterns, achieved by regulating the outlet orifice section.

The equipment is designed primarily for use in fixed fire protection installations, including all types of outside flammable liquid storage tanks and structures.

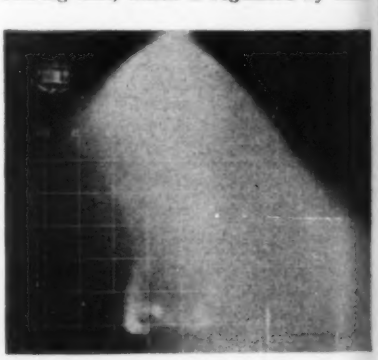
Fires in general, and certain types of specially-constituted fires, are more effectively dealt with by the use of water or other liquids in the form of a spray consisting of rather large droplets. These droplets are distributed throughout a conical spray and travel with a sufficient velocity to penetrate the heat updrafts.



New Viking Spray Nozzle

The spray nozzles are mounted in a fixed or permanent installation in the immediate vicinity of the tanks to be protected. They are so arranged as to overlap in their spray coverage. This results in equal distribution throughout, as mentioned previously, because the overlapping edges of the sprays combined, contain the same amount of spray as in the center.

The sprays are operated through a sensing unit, which is regulated by temperature. In other words, when temperature in the area surrounded by the sprays reaches a certain point, the devices are turned on automatically, eliminating any initial manual operation.

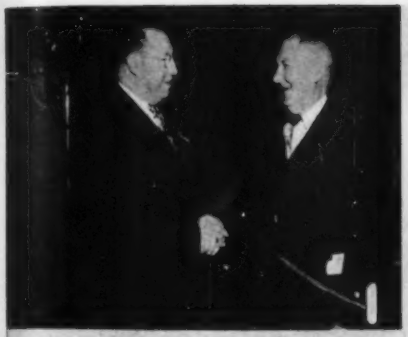


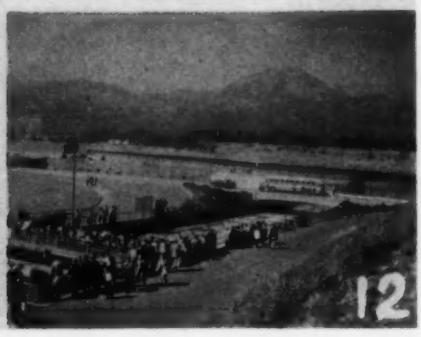
Showing Spray Pattern of New Viking Nozzle

Spray installations are utilized with equal value in the vicinity of open or closed tanks. In the case of open tanks, should any fire occur, the spray is directed into the tank, eliminating the fire danger.

With respect to closed tanks, presence of spray nozzle equipment in the area will prevent the fire from spreading to

(*Continued on page* 944)





Photos by C. E. Goodman

Snapped on the "Corrigan Special" and at the I. A. F. C. Conference

1. Chief L. C. Canning, Midvale, Utah, Chairman of Exhibits, being congratulated by Charles J. McCarthy, President, American-Elkhart Co., San Francisco, for a job well done. 2. Chief Henry R. Chase, Miami, Fla., "enjoying" the cool breezes of Puget Sound on boat trip from Seattle to Victoria, B. C. Henry says the overcoat is owned by the Miami Chamber of Commerce and loaned to him for the trip into the frozen North. 3. Canadian Chiefs Rosaire Beaulieu, Quebec, and Angus Mickie, Lachine, Quebec, on "Corrigan Special." 4. New Jersey had nineteen chiefs and five commissioners at the convention. Part of the group are shown with Commissioner Corrigan. Left to right are: T. P. Klimback, West Caldwell; A. W. Bilby, Montclair; M. J Corrigan, Chicago; J. McFarland, Kearny; George F. Bondin, Hoboken; William G. Wandras, Kearny, and John B. Keenan, Newark. 5. Chief John McDonough, Boston, on boat trip for "Corrigan Special" passengers from Seattle to Victoria, B. C. 6. Left to right: I H. Case, FIRE ENGINEERING; Raul Gandara, Chief, Insular Fire Service, Puerto Rico; C. F. Hanson, Chief, U. S. Army Forces, Antilles-San Juan, Puerto Rico, and Fred Shepperd, FIRE ENGINEERING. 7. John H. Arnold, Assistant Chief Engineer, National Board of Fire Underwriters, Chicago, with Mrs. Arnold and Frank F. Stover, The Gamewell Co., Chicago, Ill. 8. San Francisco fire boat greeting the "Corrigan Special" passengers on ferry from Oakland to San Francisco. 9. Passengers on the "Corrigan Special" watching the salmon climb the fish ladder at Bonneville Dam (bus trip out of Portland). 10. Passengers on the "Corrigan Special" at Multnomah Falls after enjoying the salmon dinner. Left to right are: Mrs. James Flynn, Chicago; Mrs. Ruth Fontane, Baton Rouge, La.; Chief and Mrs. R. A. Bogan, Baton Rouge; Dr. and Mrs. Walter Ratliff, Baton Rouge, La.; Chief and Mrs. Howard Dey, New Orleans and Chief and Mrs. A. A. Hansen, Westwego, La. 11. Chief John Klinck, new Chief of Memphis, Tenn., in exhibit hall. 12. "Corrigan Special" at Vista House overlooking Columbia River enroute by buses to Bonneville Dam and salmon dinner at Multnomah Falls.

Short Cuts and Gadgets

CHECKING SOURCE OF SMOKE-AT-NIGHT

Sometimes at night it is difficult to locate the source of smoke which may be detected by smelling, but is not readily visible to the naked eye. Under these conditions it may be well to turn off all lights in a room, even throughout the building, and use the beam of an electric torch, which will often show up a wisp of smoke that would otherwise not be detected. The smoke then can be followed to its source in the same way.

* * *

HOSE PROTECTOR

Recently the Jamestown, N. Y., Fire Department had to stretch a hose line across a busy thoroughfare in order to fight a dump fire. The result was a traffic snarl that impelled Assistant Chief John F. Martyn, of that department, to do something about it.

The result is a "home made" hose bridge, which Chief Martyn terms his "Modern Street Hose Protector," illustrated herein. The "gadget" consists of two sections of 1½ in. pipe, each about 10 ft. long, equipped with manifolds and standard fire department couplings. The pipes are connected and stretched across the street. When attached to hose sections at each end, the water flows through with little loss of pressure and "in sufficient volume to meet the standards of adequate fire streams."

The illustration shows one manifold of the device with the front tires of a large piece of apparatus resting on it. The entire device weighs only 60 lbs. and can be carried on any vehicle. During the winter, the Chief says when the streets are covered with snow, the appliance may be buried beneath the snow, making a completely smooth surface over which the vehicles can travel. Where streets are unpaved the appliance may be sunk into the ground producing the same results, and on other streets where loose soil is available, earth can be built around the pipe to reduce the rise.

Thank you, Chief Martyn.

* * *

WE BORROW FROM THE BRITISH

Here's a "short cut" and "gadget" we lift from our esteemed contemporary, "Fire," published in London, Eng. It is a device "for stowage and use of lines."

"One of the problems that confront the Service and those who make major fire appliances," the explanation states, "is that of enabling appliances (apparatus in the vernacular of the U. S. fire service) to carry the maximum of gear, combined with the minimum weight and, also, economy in locker-space (compartments to us).

"Stowage of the 120 ft. hemp rescue lines, the 100 ft. and 50 ft. manila lines, requires more room than is consistent with their weight, particularly if they are to prove facile in operation.

"When lines are made up neatly, are easy to handle and stow, and do not foul other lines, or gear, in the lockers (compartments) they tend to be inefficient in operation. Unless considerable care is exercised, one is confronted with a tangled line, which creates delay at a period when the time factor is of great importance.

"On the other hand, lines made up for quick operation are usually unsightly, loose and difficult to stow. They foul other gear and tangle easily, are awkward to handle, and will not stand rough use.

"It is considered therefore, that to give satisfactory service, all lines should be made up to comply with the following requirements—neat and tidy in appearance, and easily stowable; instantly available for rescue, or other use; able to withstand rough treatment; capable of easy transport and handling; and retention of all the above features, whether the line is wet or dry.

The "Manual of Firemanship," Part 6a, Pages 244 to 249[1], deals fairly extensively with the subject of making-up lines, but each of the methods there described and illustrated has some particular fault which prevents fulfilment of the requirements just mentioned. Let us consider these methods ad seriatim:

FIGURE OF EIGHT: Fairly efficient in operation, but decidedly untidy and unreliable in stowage. Does not stand up to rough treatment, and easily becomes insecure in the lockers. Middle of the line is not readily available. Line tends to foul easily, and presents difficulties in transport.

AMERICAN ROPE COIL: Very neat and tidy in stowage, stands up well to rough treatment and can be carried up a ladder without fouling. To operate, all the turns must be removed before it can successfully be put to work. If thrown from a window, with the turns still on, the line tends to foul, particularly if it is wet, or has been made up tightly. The middle of the line is, again, not readily available and for rescue work causes a considerable time lag.

CHAIN COIL: Very untidy; occupies too much room; fouls easily; difficult to operate when wet.

In the desire to eliminate the difficulties mentioned, intensive experiments have been made with a new type of "line-former" and these tests have proved the device to be satisfactory under all conditions.

Before attempting to construct a line-former, (see diagram) embodying both

(*Continued on page* 942)

[1]MANUAL OF FIREMANSHIP, Part 6A: A survey of the Science of Fire Fighting. Published by His Majesty's Stationery Office, London. Six parts have been published, others are in process.

Improvised Hose Bridge Demonstrated

Left: Jamestown officials witness demonstration of new hose bridge devised by Assistant Chief John J. Martyn of the Jamestown Fire Department. Shown left to right: G. Harry Nelson, Police Chief (deceased); Superintendent of Utilities, Clayton Johnson; Lieutenant Traffic Division Officer, Erickson; Mayor, City of Jamestown, Samuel Stroth. Kneeling, Chief Rudolph Swanson (First Vice-President International Association of Fire Chiefs) and Chief Martyn. Right: Improvised Hose Bridge, made of parallel pieces of 1½-inch pipe fitted with fire hose connections at each end.

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Orchids to Thomas Milana, Aged 13

The orchids of the month go to 13-year-old Thomas Milana of Brooklyn, N. Y., for his quick thinking and prompt action which saved the life of his aunt when fire struck the plastic oxygen tent in which she was confined.

The lad had only just been discharged from a Brooklyn hospital after an operation for appendicitis. He was a convalescing in a room adjoining that of his aunt, Miss Katherine Bella, 30, suffering from thrombosis. She was bedridden and covered by a full length plastic tent, while receiving a constant supply of oxygen. For five months she had been receiving the oxygen, which is forced in and out of the tent by a motor-driven pump beside the bed, through two aluminum ducts.

At 1:00 P.M., on October 20, last, police report, a short circuit in the mechanism ignited the tent. Miss Bella beat at the flames with her hands and screamed for help. Thomas, convalescing in the adjoining room, rushed to her aid, calling for his mother who was working in the kitchen.

The boy's first thought was that the oxygen should be shut off because he understood if allowed to flow freely it would intensify the fire. Thomas used both hands to plug the oxygen ducts and in a moment his mother appeared and closed the valve, shutting off the gas. She pushed the tent from her sister's bed and she and Thomas stamped out the fire.

For 20 minutes Miss Bella was without oxygen, but then a private physcian arrived and adjusted an oxygen mask for her, treating her also for shock and first degree burns. Thomas also received treatment for slight burns on his feet.

* * *

Firemen Parade to Blaze in Droves—Plant Burns

A spectacular blaze destroyed a Rockville, Md., pinball machine plant one night "despite an enthusiastic invasion of the area by an army of equipment from a firefighters' parade in nearby Sandy Spring."

That's the way the news account had it. Which related that damage to the Red Ball Mfg. Co. was estimated at $75,000.

The fire interrupted the firefighters as companies from near and far were parading in their finest, with their finest of apparatus. Equipment from such far-flung spots as Lisbon in Frederick county and Rivera Beach in Anne Arundel county responded. "As flames leaped 50 feet in the air, fire trucks, which jammed the area bumper to bumper (we're quoting now) shuttled about seeking hydrants." The rear of the 200 by 100-foot one-story frame structure collapsed minutes later.

One Rockville volunteer fireman was overcome by smoke and several were treated for heat exhaustion. Police said the resultant traffic jam extended for several miles south on route 240.

Besides the out-of-county units, companies which responded included Brookeville, Sandy Spring, Chevy Chase, Kensington, Gaithersburg-Washington Grove, Bethesda, Rockville, Silver Spring and the Bethesda-Chevy Chase rescue squad.

Thanks IRVING JOHNSON

* * *

Mebbe There's a Moral in This Tale—

This had to happen sometime—and it is going to happen again—unless—

Fireman Robert L. Howe, of North Hollywood, Calif., was the victim, innocently enough. The routine report of the affair simply said he jumped for the sliding pole, missed and fell 18 feet to the concrete floor. He suffered a severe head gash and shoulder injuries. He was lucky!

What actually happened is described by fellow firemen. It seems that at the sound of the alarm, Howe ran for the pole, pulling on his jacket en route. His arm became fouled in the sleeve and with his momentum he couldn't grab the pole after he had left his feet.

Uh huhh—the alarm was for an insignificant grass fire, put out by one unit. Thanks W. A. MCDONNELL

* * *

"Busy—Come Back Later? ? ? ?"

Should fire fighters hang out the "Gone to a fire—come back later" sign or something like that on the front of their fire station when they roll? The Brothers of Engine 225, Liberty Ave., Brooklyn, N. Y., opined so after a recent experience.

Seems a fire went to their firehouse, but they were away "on another job" and so the "blaze had to wait patiently until they returned," according to the wayward press.

It all came because Patsy Sanella thought he was doing the right thing when he drove his Sanitation Department truck to the firehouse after it caught fire. He was driving along Southern Parkway about 2 P.M., when he discovered the rubbish in his vehicle was ablaze. He and two companions battled the smoldering cargo without success. Finally they made a half-mile dash to Engine 225, where Patsy was sure the Brothers would save the day.

Alas and alack, all hands were out, operating on a neighborhood grass fire. However, all was not lost. The station watchman came to the rescue and got a hurry-up call to the company which, learning there was bigger and better business at home, sped back to quarters to put the quietus to Patsy's blaze.

Deponent saith not how the Braves were recalled—t'best of our knowledge Engine 225 has no radio.

* * *

Homecoming Bonfire Blast Injures 9

When the University of California, Los Angeles branch, staged a huge home-coming rally on the campus to precede the UCLA-Stanford game secheduled for October 21, something went wrong, by accident or intent, and the bonfire blew up in the middle of thousands of celebrants. Nine persons were injured, windows were blown out and for a few moments there was near panic.

The students had spent weeks gathering the bonfire materials, which were stacked on the campus in a 67-foot high pile. At the appointed time, a crowd of students and alumni variously estimated at nearly 20,000, gathered around the pile, when it was touched off. Fortunately they were held back 10 feet, by ropes encircling the bonfire. This fact doubtless reduced casualties.

Captain L. E. Christiansen of the campus police said several small bombs, presumably placed by pranksters were removed from the heap before it was ignited, but one or more may have been overlooked. He also said a gunpowder fuse used to start the fire may have caused the blast. At any rate the "homecoming" went off with a bang.

None of the injuries was reported of serious nature.

* * *

Hot Off the Tape

An 18-year-old girl, Gloria Rose, who sank in 12 feet of water while bathing in a swimming hole at Grassy Point near Haverstraw, N. Y., was revived by artificial respiration although she had been under water, it is reported, for 12 minutes. A state trooper, C. P. Schwartz, and Dr. Stephan Ivanoff, brought her around after 45 minutes work. . . . In Cincinnati, Ohio, firemen under Fire Marshal William Telscher responded to two minor fires within an hour. In both instances the name of the resident affected was "Washington" and they were unrelated. . . . Fire Chief Wilbur C. Heistand of Salunga, Pa., shouldered the blame for an explosion which shattered windows and frightened residents of the community. He said he poured kerosene on rubbish in the cellar of a building he was razing and applied a match to it. Well, that's one way to get it down. . . . Fire swept the Crib Diaper Service plant in Evanston, Ill., and 36,000 diapers were destroyed. Write your own caption. . . . Grand Rapids, Mich., firemen were called to the Kent County Building where smoke was reported swirling out of the tower. The Brothers found otherwise. It was a swarm of bugs. . . . John H. Smith, an auto worker, was fined $25 and costs by a Cincinnati Municipal Judge when convicted of violating the new city ordinance which prohibits smoking in bed. . . . The Glenmore Hotel on Big Moose Lake, N. Y., famed as the setting of Theodore Dreiser's novel "An American Tragedy," was destroyed by fire September 9. No one was in the old 4-story frame structure, located about 15 miles north of Old Forge. . . . Columbus, Ohio, firemen had to hunt for some time to find a house that was reported on fire. They just weren't looking high enough. The "house" turned out to be a boy's shanty in a tree. . . . Henry L. Scott, manager of Palace Cleaners, Alexandria, Va., and past president of the Virginia Firemen's Association and one time chief of Fire Company 1, had his plant across from his old fire outfit. Uh huhh, the plant caught fire and he was burned out before the lads could get across the street to save the place. . . . Members of Company 3 of the Linden, N. J., Fire Department stood by on an August night while an emergency crew of the Gas Company repaired a leak in a gas line. The gas became ignited and firemen let it burn until flow was shut off. . . . An explosion of undetermined origin shook the chemistry hall on the University of Notre Dame campus at South Bend, Ind. No one injured. Somebody said it was just the football team starting fall practice.

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A NEW SIREN BY MARS

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This Siren Was Displayed at the IAFC Convention, San Francisco, September 12 - 15.

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When answering calls, the front light sweeps the street and intersections from side to side far ahead of the apparatus, warning all traffic of direction apparatus is moving. This powerful beam of Red light can be plainly seen by traffic approaching intersections *ahead* of you long before you reach the crossing. When apparatus is standing, rear light can also be used to provide protection for men and equipment from *front, rear and both sides.*

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"That City Fireman Just Can't Get Used to the Dinner Gong!"

Traffic Cop: "Hey you, didn't you hear me whistle?"

Sweet Young Thing: "Yes, darling, but you're wasting your time. I'm already engaged."

A woman approached the pearly gates and spoke to Saint Peter. "Do you know if my husband is here? His name is Smith."

"Lady, we have lots of them here. You'll have to be more specific."

"Joe Smith."

"Lotsa those, too. You'll have to have more identification."

"Well, when he died he said that if I was ever untrue to him he'd turn over in his grave."

"Oh, you mean 'Pinwheel' Smith."

A farmer's wife had become mentally deranged. As they carried her out of the house in a strait jacket he said: "I shure don't know what got into her—she ain't been out of the kitchen in 25 years."

A candidate for sheriff called on a minister to ask for his support at the coming election.

"Before I decide to give you my support," said the minister, "I would like to ask you a question. Do you partake of intoxicating beverages?"

"Before I reply," said the candidate cautiously, "is this an inquiry or an invitation?"

NEAR SIGHTED

An old maid traveling through California for the first time saw a fig tree. She said to the guide, "My good man, what kind of a tree is that?"

"Lady, that is a fig tree."

"Oh, no, it can't be a fig tree," she said.

"Yes ma'am, that's a fig tree."

"Oh," said the lady, "I thought the leaves were larger than that."

The head of a local bus company called in his new driver. "You drove a bus all day to-day," he stormed, "and didn't have a single passenger. What happened?"

The driver shrugged indifferently. "I just didn't have any passengers that's all."

"You mean to say no one waved at you?"

"Oh, sure," replied the driver, "people waved at me at every corner, but I wouldn't stop for any of them. Why should I? They didn't notice me when I was out of work."

"D'you know, Mrs. 'Arris, I sometimes wonder if me 'usband's grown tired of me."

"Whatever makes you say that, Mrs. O'Higgins?"

"Well, 'e ain't been 'ome for seven years."

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The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

FIRE DEPARTMENT COOPERATION WITH INDUSTRIES

JUST how far should a fire department cooperate with, and enlist the cooperation of industries in its community? Is it possible to gain the cooperation of industry, locally? What sort of advice is asked by industry of fire chiefs? These and kindred questions are well answered in the responses to this month's Round Table.

Respondents, who include many of the outstanding fire chiefs of the nation, offer numerous ways in which they cooperate with industry in their localities, to insure better fire protection. At the same time, they outline the measures they take to join with industrial concerns in instituting fire prevention activities.

Some idea of the different fire prevention measures asked of fire chiefs by industrial organizations is contained in the reports of these respondents. This response indicates a healthy respect on the part of industrial fire protection and prevention engineers for the opinions and cooperation of the local fire chiefs and fire departments—a cooperative viewpoint that is greatly to be desired. When the day comes that industrial concerns fail to solicit the assistance and advice of their local fire departments, it is time to review and rehabilitate the department's entire fire prevention policies.

Production being the order of the day—and industry being responsible for production, it is time to overhaul all previous plans for protecting that essential production—both as concerns the large industrial plant, and the smaller but nonetheless important concern, contributing to the nation's defense set up.

It is hoped that the expression of these representative fire chiefs will aid other readers of this Journal to inaugurate and speed up fire prevention and fire protection programs within the orbit of their jurisdiction.

Readers are invited to send in their comments on this subject which will be continued in the December issue. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Adelbert J. Sargent, Chief, Hammond, Ind: Every year, the year around, we participate in an extensive industrial program, and are very instrumental in conducting fire schools for industries in our city. As everyone knows, we are located in the industrial center of the world, which means that we must protect the interests and large investments in our own locality.

We conduct a fire school annually for all industry, volunteer fire departments, and all neighborhood fire departments, so as to teach all those whom it may concern, the latest developments in fire fighting technique. We also conduct special fire schools during the year at the various plants. We teach safety directors and their representatives the various methods and phases of fire prevention and protection.

We take part in the fire prevention activities of these plants by sending our three fire prevention inspectors and myself to the various industries to preach fire prevention continuously. As a result, we did not have any industrial fires for at least two years, which is quite a record.

We supervise and give each industry professional advice pertaining to the proper type of fire fighting equipment and fire extinguishers, so as to protect special fire hazards throughout the plants, recommending fire prevention measures, etc. Along this line we also show films on fire prevention in industrial plants, and maintain the individual fire alarm systems.

We cooperate 100 per cent with all our industries, and it is my belief that

HERE IS THE TOPIC

1. **In what ways do you cooperate with large industries in your city to provide better fire protection?**
2. **Does your fire department partake in fire prevention activities with large industries?**
3. **Are you called upon by these industries for professional advice, such as recommending the proper type of fire fighting equipment to protect special hazards, recommending fire prevention measures, etc.?**
4. **In what other ways do you believe such cooperation can be extended beneficially?**

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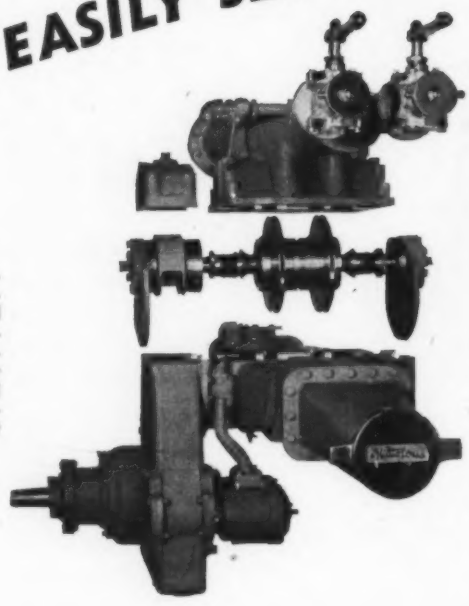

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every local fire department should cooperate with industry because it is for the best interest of everybody concerned.

All hose connnections in industrial plants should be the same as those in the local fire department, and all standpipe connections should be standard and similar to those in the fire department.

Every industry should have some other means of dispatching a fire alarm aside from the local telephone, such as the fire alarm system. All industry should be equipped with sprinkler systems so as to cope with all kinds of dangerous fire hazards such as paint dipping tanks, booths, spraying paint, etc.

In May and October of each year, every officer in his respective fire station is required to contact every industry in his locality. The reason for this practice is to acquaint every officer with the various situations with which he has to cope in an emergency.

Furthermore, each industry should know its own local fire department thoroughly, as is the case in Hammond.

Ira D. Leech, Chief, Decatur, Ill.: Decatur is known as the Soy Bean City. We have five processing plants in our city and all have fire protection. Millions of bushels are handled daily.

We keep in constant contact with the plants in our city and help them to keep their equipment in good working condition at all times.

We work them in some part of our fire prevention program during Fire Prevention Week. I can say all of our larger factories are fire-minded. The A. E. Staley Manufacturing Co., for example, has a 750-gallon pumper of its own for fighting fires.

I have yet to ask the manufacturing plants for anything and have them turn me down. Their cooperation is of great benefit to Decatur.

Randolph Byrne, Fire Inspector, Norwood, Ohio: We have periodic inspections of factories and issue bulletins once a month. For ten years I have talked an extra company, new equipment and more manpower for this purpose. All has been accomplished.

We hold meetings of the fire brigades in companies where they wish it. Most of our industries have these brigades left from the last war.

We are sometimes called upon by our industrial plants for advice. In most of these cases we have been guided by underwriters' rulings. We sometimes suggest that they call in their own insurance companies.

If an insurance inspector believes certain changes should be made in industry, I do not believe it would do any harm for him to call the fire department representative, so the viewpoints would be alike and possible changes made faster. I recall on two occasions that suggested changes I made were in accord with those of the insurance inspector, even though we worked independently. On each occasion the change was made. Our thought is to cooperate with any agency, so long as we accomplish our objective—preventing fires.

L. L. Petrey, Chief, Mobile, Ala.: The assistant chiefs, the fire inspector and the captains of the department inspect large industries from time to time and advise the owner or super-

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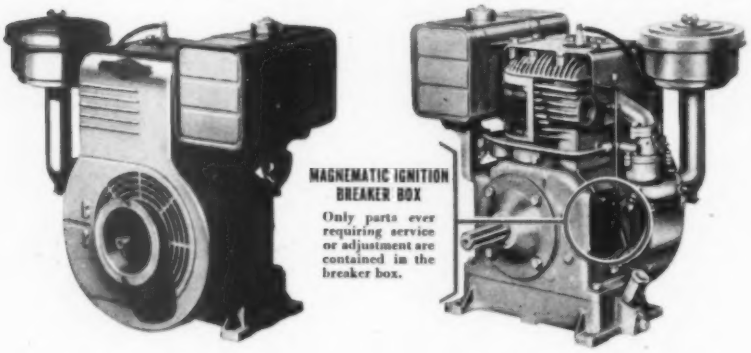

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intendent in regards to ways of pr viding better fire protection, such a renewing fire hose on standpipe sy tem, having fire extinguishers r charged and the necessity of goo housekeeping.

We also cooperate very closely wi Brookley Field.

The department is often called upo for professional advice on the type o fire extinguishers, hose and othe fire fighting equipment.

The fire inspector and the buil ing inspector work very closely whe a new building is being constructed, i recommending the proper fire prote tion before and while the building i being built.

Joseph Willardo, Chief, East Chicag Ind.: We work in cooperation wi the large industries of our city. If problem arises in the industries w ask their opinion as to the best po sible way to cope with the situatio and if the industries have a proble they are unable to solve, we ar called in for whatever information w can give them.

Our fire department goes throug the various plants to see what haz ards they have, so if a fire occurs i one of the plants, we know what t expect. We invite the heads of th plant safety and fire department t local fire companies so that they ca become better acquainted with ou equipment and methods of handlin fires.

Harry E. Whitcomb, Chief, Pueb Colo.: All our large industries pr vide their own fire protection, bu when they ask for additional help w send from one to two companies an an assistant chief. If the industri have no fire protection setup we sen one company and an assistant chie If additional help is needed, he call in for it.

We are called upon to make inspe tions, for advice on the type of fi protection best suited for the occ pancy, on building construction, etc.

I believe that if all industries woul cooperate with the fire department a lot of time and money would be save which certainly would benefit every one concerned. In my opinion, thi would be one of the greatest step forward industry could make and i which any fire department woul gladly cooperate.

E. P. Feaster, Chief, Lincoln, Neb.: W cooperate with large industries in ou city by giving them extra apparatu coverage on fire alarms.

Our fire department takes part i fire prevention activities by talking t and meeting with their fire fightin groups.

We are called upon frequently b these industries for advice as to th proper types of extinguishers an their usage on different types of fires We also are asked for information on the installation of electrical equip ment, the use of oil burning equipmen and installation of tanks, the prope storage of flammable liquids, explo ives, etc.

M. G. Bennett, Chief, Orlando, Fla.: W make regular inspections of the in dustries in our city. The inspector calls special attention to the particu lar hazards present.

We have prevailed upon the gen eral management of the larger indus tries to appoint a fire marshal with

Dependable FIRE PROTECTION...

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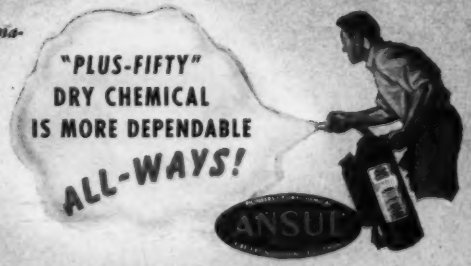

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WESTERLO, NEW YORK

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authority to hold fire drills, inspect any or all parts of the plant at any time. This fire marshal should also be held responsible for the maintenance of auxiliary fire fighting equipment. In most cases the fire marshals in the industrial plants and the fire department inspector work together. This cooperation affords the maximum protection by having the auxiliary equipment properly placed throughout the building, personnel trained in its use, etc.

William D. Thomas, Chief, Binghamton, N. Y.: A regular inspection is made of the buildings by members of the companies in their area. If the building is protected by automatic sprinklers or has an ammonia plant or air conditioning system, the officers and members of our squad company also make an inspection so they will be familiar and have a working knowledge of the above mentioned systems. Inspections made of these buildings help in better fire protection before and during a fire.

Fire prevention activities are carried out throughout the year as much as our personnel will allow. We also have added activities during Fire Prevention Week, such as distributing factory self-inspection blanks and offering our services at their safety meetings. After Fire Prevention Week is over, the self-inpection blanks are picked up by the Fire Prevention Bureau and checked for hazards.

The fire marshal gives advice and explains about the various hazards, if any, in their particular plant. He also explains the use of the various types of extinguishers. He also recommends that additional extinguishers be purchased if he feels certain hazards should be given added protection. He gives instruction in the use of extinguishers and the recharging of same, and recommends that when the extinguisher needs recharging the employees discharge it so that they will become familiar with its action.

Most large industrial companies have a safety director and since he is the one directly in charge and responsible for the safety of personnel and buildings, is generally the type and kind of official who wants to do a better job in his field and is therefore ready and willing to listen to advise that would help him in providing greater protection. The manufacturers' association should bring to the attention of their officials especially where factories are located in cities other than the main office, that fire department officials are their friends and should be consulted about fire safety problems.

Wilson McLaughlin, Chief, Sandusky, Ohio: We put on a school for key men in the various industries of our city so they can go back and organize fire brigades in their factories. This school includes instruction in the handling of extinguishers, good housekeeping in the factory and the procedure in the event of fire.

We make inspections at various intervals to help these industries with their fire prevention program throughout the year.

We do get requests for information on various phases of fire preven-

tion, and on types of fire fighting equipment. We have a very capable fire extinguisher salesman in our city, and he takes care of supplying information on the proper types of extinguishers, etc.

In our city we are fortunate to have a very good feeling between business and the fire department. Most places follow our recommendations. By education of the workers and owners of places of business, we have cut our fire loss in industry quite a lot.

H. E. Fisher, Chief, Lansing, Mich.: Meetings are held with plant protection departments to work out fire problems in different sections of the plants, such as location of the apparatus, which gates to enter, their participation (plant personnel) with our regular members under actual fire conditions. In the larger industries they meet us at the gate and direct us to the location of the fire.

We participate in the Fire Prevention Week program. Posters on fire prevention are distributed several times a year. The larger industries carry on a constant fire prevention program.

All remodelling and new building plans are checked by the Fire Prevention Bureau. Industry notifies our department when special hazards are incorporated in conjunction with production. These are checked and the necessary safety measures are incorporated. Fire lanes are established. Parking of cars is controlled. Hydrant surveys are conducted. The storage and use of flammable liquids are controlled. Meetings are held with supervision such as foreman groups, labor union groups, on fire prevention problems. No smoking areas are established by our department. Industry calls on us when production lines are changed or hazardous processes are relocated.

I believe that many departments are hesitant to carry on a constant public relations program with industries and labor groups.

Carl E. Swanson, Chief, Sioux Falls, S. Dak.: Our City Fire Inspector makes thorough inspections of industrial plants and offer suggestive remedies to various fire hazards that may exist.

At different times of the year, members of the fire department conduct tours of inspections through the various stores, business concerns and industries of the city. The results of the inspection are then given to the City Fire Inspector for review and a follow-up is made by the Fire Prevention Bureau.

We are frequently called upon for advice, concerning the right types of fire extinguishers to install, the advantages of sprinkler systems and the various types, and the type of fire alarm system that would best suit the various industrial buildings and businesses. These are just a few of the subjects on which we are called to give advice.

Through the cooperation of the employer, we have talks with key employees. We discuss what can and should be done if there should be a fire at their place of employment, to aid the fire department. We impress upon them the value of minutes saved, by showing good judgment and of reporting any fire hazards that exist.

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INDIAN FIRE PUMPS
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GUARD LIVES!
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Nozzle is adjustable for powerful, straight stream or fine spray. Big, rust proof tank holds 5 gals. of water. Civilian defense organizations were equipped with thousands of INDIAN FIRE PUMPS during the last war.
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SAN JOSE 10 *SINCE 1920* CALIFORNIA

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of October, 1950.

Month Ending October 31, 1950

McDonough, Ga.—The J. B. Henderson cotton gin, Ola community, destroyed.

Whiteville, N. C.—The large wholesale grocery store of G. V. Singletary & Sons destroyed.

Columbia, S. C.—Dining hall, office and kitchen bldg. at Adams Camp on Lake Murray, destroyed.

Saginaw, Mich.—St. Demetrios Greek Orthodox Church destroyed. Defective wiring.

Caspar, Wyo. — Nine business establishments damaged. Boy set the fires.

Boise, Ida.—Idaho Creameries destroyed. Defective meter room wiring.

Sudbury, Mass.—Three barns on farm of Aldino D. Capoldipo, Old Hood Farm, Boston Post Road, damaged.

Hope, Ark.—Gunter Lumber Co. planer mill destroyed.

San Francsico, Cal.—United Sportswear Co. and Nanca, Inc., damaged.

Twin Falls, Ida.—Long Valley Produce Co. destroyed; Northrup King Co. destroyed; Idaho Dept. Whse. destroyed; Idaho Organ. Fertilizer destroyed.

Wilmington, Ohio—Airport Bowling Alleys damaged.

Sisseton, S. D.—The 3-story brick Stavig Bros. Dept. Store and a frame structure housing three smaller business firms, in the heart of the business section destroyed. Two hours later, a grain elevator (capacity 80,000 bushels) which is nearly a mile away, destroyed.

Petawawa, Ont.—Military camp, Quartermaster's stores and drill hall of Second Loyal Canadian Regiment, destroyed.

North Sidney, N. S.—The business section, nine businesses, a hotel, a funeral parlor, Lamie Morot, Ltd., Lamie's feed store, Nadaffs gen. store, Northern Whse., Empire Hall, damaged.

Big Bear Lake, Cal.—Inspiration Lodge destroyed.

Chico, Cal.—Coey's Shoe Store, Cents-Ible Drug Store and Nichols Hardware Store, damaged.

Evansville, Ind.—Trockman junkyard, several bldgs. and yard storage, destroyed.

Baltimore, Md.—Crown Venetian Blind Co. and Frigidaire Sales Corp. destroyed.

East Prairie, Mo.—Mill and grain elevator destroyed. Spontaneous ignition.

Newark, N. J.—Red Raven Rubber Co. damaged.

Portland, Ore.—Peyton McDowell Bag Co. destroyed. Arson.

Corning, Cal.—Bates Furniture Store damaged.

Hamlin, Ia.—Elevator owned by Carlson Hybrid Corn Co. destroyed. Defective wiring.

Lakeland, N. J.—Barn at Camden County Institutions destroyed.

Youngstown, Ohio—Central Tower bldg. damaged.

London, Ont.—Talbot Street Baptist Church destroyed. Defective wiring.

St. Louis, Mo.—The carpet dept. of Enterprise Cleaning Co. damaged.

Wildwood, N. J.—Whse. of Garden State Food Products Co. destroyed.

Jamestown, N. Y.—Two whses. occupied by Jector & Bloomberg Trucking Companies destroyed. Oil stove explosion.

Gravenhurst, Ont.—Muskota Beach Inn destroyed. Lightning.

Winnipeg, Man.—Plt. of Winnipeg Paint & Glass Co., Fort Rouge, damaged.

Dayton, Ohio—Standard-Thomson Corp. plt. damaged.

Fort Frances, Ont.—High school, one wing, destroyed.

Santa Rosa, Cal.—Fitzgerald Egg Co. and Wellman Peck Flood Whse. destroyed.

San Carlos, Cal.—Clover and Oliver window and door frame mill and O'Neill Lumber Co. damaged.

Cochran, Ga.—Edmondson-Griffin Lumber Co., Cochran Oil Mill and Pritchard Cabinet Co., large stock of lumber, 200 tons of cotton seed and peanuts, Rozier filling station, damaged.

Ann Arbor, Mich.—Montgomery-Ward & Co. whse. damaged.

Morristown, Tenn.—Section of Walter Mfg. Co. plt. destroyed.

Olympia, Wash.—Butler Cove Tavern Cafe destroyed. Short circuit.

Great Lakes, Ill.—Disbursement office bldg., Great Lakes Naval Training Center, damaged.

Dallas, Tex.—Davis-Jefferson Lumber Co. plt. damaged.

Goderich, Ont.—Knox Presybterian Church destroyed.
Ironland, Mich.—Northern Fibre Products Corp. plt. destroyed. Blow torch.
Philadelphia, Pa.—Netsky Bros. Plt. destroyed.
Myrtle Beach, Ore.—L. W. Metzger Block, fourteen business firms, destroyed.
Burnaby, B. C.—Factory of Tru-Fit No Work Ltd. destroyed.
Oleuba, Cal.—Tire and repair shops of Willard Cochran & Sons Garage damaged.
Red Bank, N. J.—Star Dust Inn, Navesink River, near Route 35, destroyed.
Cottage Grove, Ore.—Lorane Valley Lumber Co. damaged. Lightning bolt.
Olympia, Wash.—Olympia Sports Center destroyed. Short circuit.
Van Buren, Ark.—Plt. of Van Buren Canning Co. and whse. damaged.
Trona, Cal.—Combination coffee shop and mess hall of American Potash & Chemical Co. plt. destroyed.
Marion, Ind.—Smax Products Co. destroyed.
Chicago, Ill.—St. Alphonseus Church damaged.
Baltimore, Md.—United States Plywood Corp. office and whse. damaged.
Oriskany Falls, N. Y.—Fire swept a three-story whse. storage bldg. of the Robert G. Shaw genl. store.
Forest River, N. D.—Potato whse. destroyed.
Norfolk, Va.—Armour Fertilizer Works, Money Point, destroyed.
Bluefield, W. Va.—Bluefield Grocery Co. damaged. Adj. automotive dept. of Superior Sterling Co. damaged.
Huntington, W. Va.—J. C. Penney Co. dept. store and Tipton Theatre destroyed.
Tucson, Ariz.—Whse. and dwelling occupied by Thom Flaherty Furniture Co. damaged.
Baltimore, Md.—Siedel's Bowling Alleys and adj. tavern damaged.
Blairston, N. J.—Payne Cutlery Corp. destroyed.
Camden, N. J.—Juvenile furniture store, Broadway Floor Covering Co., paint store and greeting card shop damaged.
Cincinnati, Ohio—Loft bldg. occupied by Mid-West Salvage Co. destroyed.
Philadelphia, Pa.—Barn on estate of William L. Nassau, Jr., Swedesford Road, near Paoli, destroyed.
Scranton, Pa.—Duryea-Anthracite Coal Co., Keystone section of Plains Twp. damaged.
Donnacona, Que.—Bldg. occupied by shirt factory, dairy plt. and apt. destroyed.
Newark, N. J.—Apt. house occupied by Reliable Electrical Supply Co. damaged.
Fayette, Ala.—A. & M. Laundry, destroyed.
Pocahontas, Ark.—Higginbotham Funeral Home, destroyed.
Hermosa Beach, Cal.—Mer-Maid restaurant destroyed. Explosion.
New Athens, Ill.—Whse. and brick bottling plt. of Mound City Brewing Co. destroyed.
Severy, Kans.—Elevator office and whse. of Maxwell Seed & Grain Supply Co. destroyed.
Battle Creek, Mich.—The half-block long, brick bldg. plt. of the Eaton Mfg. Co., makers of jet plane engine blades, destroyed.
Farmingdale, L. I., N. Y.—Farmingdale Theatre destroyed.
Portland, Ore.—Lumber mill and cottage, damaged.
Hepp, Ore.—Heppner Lumber & Planing Mill destroyed.
Rhinebeck, N. Y.—Main bldg. of the Cardinal Farley Military Academy destroyed.
Greenville, Ohio—Harter Chick Hatchery, Pittsburgh, destroyed. Explosion.
Eau Claire, Wis.—Bldg. occupied by a jewelry store, bakery, drugstore and restaurant, damaged.
Sharon, Pa.—Roux Feed Co. plt. damaged.

World Wide Fire News

By Roi B. Woolley

Spanish Freighter Burns in Halifax

On Oct. 10, 1950, the 3,500-ton Spanish freighter Monte Inchorta raced back to Halifax, N. S., after fire broke out in her hold. The blaze smoldered under the closed hatches and when firemen opened the holds on the 11th, the fire spread through the ship.

The crew abandoned the vessel, the decks of which got so hot fire fighters could not board her. They continued to pump water into the flaming hulk until the 12th, when the ship keeled over at her dock, crashing her superstructure against the pier.

The ship's bow came to rest on the

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TO OPERATE
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It's a Randolph!
The first 10 to 30 seconds can mean the difference between no loss and complete destruction when fire starts. That's why Randolph's simple, obvious operation is so important in stopping fires before they spread!
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Learn how Randolph gives your plant better preventive fire protection! Write Randolph Laboratories, Inc., 19 East Kinzie St., Chicago 11, Illinois.
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DON'T COMPROMISE ON QUALITY—DEPENDABILITY

A snagged hose line can cause serious accidents and can ruin your hose. Experienced fire-fighters appreciate the curved surfaces of the "Sensible-Lug" which enable hose to glide over all obstructions thus protecting life, limb and equipment.
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Established 1892

HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary and Piston Pumps Supplied
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bottom as firemen continued to flood the holds in the effort to save some of the blazing cargo of coal, soy beans and machinery. Officials, however expressed little hope of saving the vessel.

* * *

Modesto Seeks Cause of Mystery Blast

Officials of Modesto, Calif., were seeking the cause of a mysterious explosion early in October, which rocked that city area at 7:55 P.M.

Throughout a wide area windows rattled, chinaware was thrown from shelves, and some plaster dislodged from ceilings and walls. The concussion, felt 15 miles away, was so severe that a general fire alarm was reported to have been sounded.

Police said the blast might have been the concussion of a diving jet plane, but military authorities reported no such aircraft in the vicinity.

Fire, police and newspaper officers received numerous inquiries as to the cause of the explosion.

* * *

Hot Off the News Ticker

The City of South Amboy, in October, filed claims totaling nearly $136,000 for damages caused to municipal property in the May 19 munition blast. Claims were filed against the owner and charterer of four lighters that were blown to pieces in the disaster. . . . Judgments in amount of $674,302 in 35 damage suits against the O'Connor Electroplating Corp., of Los Angeles, were awarded in September. The suits developed out of the explosion at the company's plant Feb. 20, 1947 which killed 17 persons and injured 126, in addition to razing homes and business structures near the plant. . . . Fire on Oct. 8th destroyed the Bethune tobacco factory, one of France's largest, burning tobacco worth a billion francs ($2,850,000). No casualties were reported. . . . In Salybridge, Eng., hundreds of people, knelt, praying in the street on Oct. 4, as a man jumped 100 feet from the top of a blazing cotton mill. The man was taken to a hospital with back injuries and severe burns. . . . Nine stevedores were burned when part of a red phosphorus chemical shipment exploded in the hold of a Germanbound freighter in Baltimore. Forty-five men were working on the vessel, some stowing the Marshal Plan cargo of phosphorus. The 20-gallon tins were labelled "Do Not Drop!" but one tin fell, and the explosion occurred. . . . In Nykobing, Denmark, a Danish journalist awoke to find his pajamas on fire. Having beaten out his private blaze, he realized that it sprang from a spark blown into his open bedroom window from a big fire raging only a few hundred yards away. The journalist hopped into his clothes and reported the fire for his paper. . . . Memo to "JK"; yes the Brockville Fire Extinguisher Co., of Brockville, Ont., was destroyed by fire last spring. Loss was estimated at $50,000 . . . In France, six buses were returning from a day's outing, when someone in the leading vehicle had the bright idea of waking his sleeping companions with a shout of "Fire!" He yelled; the driver, frightened, braked suddenly and the second bus in line crashed into the back of the first. Twenty-five of the 51 passengers were hospitalized. . . . In Lincoln, Eng., more than 100 members of a first-aid brigade fainted during an annual inspection last summer. They received

first aid from other members. . . . The Syrian Government reported that sixty persons had been killed and nearly 100 injured in an explosion at a fuel depot at Homs, 100 miles north of Damascus. The official announcement considerably reduced the original estimated number of casualties. . . . More than 20 Morroccans died when a bus caught fire after colliding with a truck on the Taza-Fez road. . . . A deposit of heavy caliber aerial bombs exploded near Catania, Sicily, killing at least 14 persons. The blast rocked the city of 245,000, gouged a hole 25 feet deep. . . . An explosion in an ammunition dump in Patalia, India, killed thirty-two persons and injured forty. Stores were crushed as massive walls of the old fort blew out. Explosion was reported caused by an accidental fire. . . . Finnish ballet dancer Aino Nyman, 36, was burned to death when his paper-like costume caught fire from a cigarette in his dressing room in Helsinki. The victim rushed into the dressing room of the ballet girls but, dressed like himself, they could not aid him. He dashed out of the theatre and tried unsuccessfully to extinguish the flames by rolling in sand.

Questions and Answers

Combined Lines

To the Editor:

1. Two engines are pumping into a deluge set equipped with a 1¾-inch tip at 70 pounds nozzle pressure. One engine is pumping through 500 feet of 2½-inch hose and the other through two 500-foot lines of 2½-inch hose. Please give me the correct engine pressure to use on this layout.

2. Two engines are pumping into a deluge set equipped with 1¾-inch tip at 70 pounds pressure. One engine is pumping through 1,000 feet of 2½-inch hose and the other through two 300-foot lines of 2½-inch hose. What is the engine pressure? C. W. F.

Answer: In solving Problem No. 1, the simplest method is to consider the engine pressures on both engines as the same, although this will mean that one engine will be supplying more water than the other.

First solve as if the three lines were being fed from the same engine.

The formula for finding engine pressure is E. P. = N. P. × (1.1 + KL).

K, for 3 lines of 2½-inch hose and 1¾-inch nozzle, is .115.

L = 500 ÷ 50, or 10.

E. P. = N.P. (70) × (1.1 + .115 × 10)
= 70 × 2.25
= 157.50 pounds.

The discharge from a 1¾-inch nozzle at this pressure is 29.7 × 1¾ × 1¾ × √70, or 761 gallons per minute.

In the above formula, 29.7 is a factor; 1¾, the nozzle diameter; and 70, the nozzle pressure in pounds per square inch.

Each line will carry ⅓ of this quantity of water, or 253.7 gallons.

Engine No. 1, which supplies a single

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Actual fire tests made by the Underwriters' Laboratories, Inc. show that fire detection with this type of smoke detecting equipment is much quicker than other methods . . . because usually there is smoke or smoldering before flames break out.

There is no water damage, no lingering odors with carbon dioxide . . . only damage is that actually caused by the fire itself. Carbon dioxide is clean, dry, non-conducting and non-damaging . . . harmless to finishes, materials and equipment. The fire is out in seconds, with hardly any interruption or commotion.

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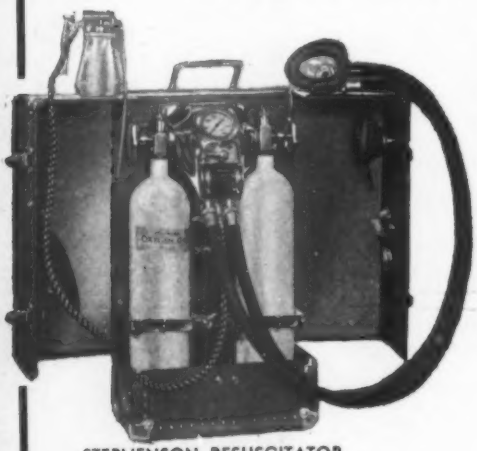

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ESTABLISHED OVER 70 YEARS

line, would discharge 253.7 gallons per minute. Engine No. 2, which supplies two lines, would discharge 507.4 gallons per minute.

It is not possible to solve this problem in a way which would give different pressures on the two engines, for these two engines could be run at an infinite number of different pressure combinations, which would still give 70 pounds at the nozzle.

Answer 2. This problem can be solved by averaging the lengths of the three lines and solving as in Problem 1. But the results would be inaccurate, because one engine is pumping through a line 1,000 feet long, while the other engine is pumping through two lines 300 feet long.

The discharge from the nozzle will be the same as in the previous problem, for the nozzle pressure and diameter are the same. The discharge is 761 gallons per minute.

Assume that each line is carrying the same quantity of water. The friction loss per 100 feet of 2½-inch hose carrying 253.7 gallons per minute is $2 \times Q \times Q + Q$, where Q is the flow in hundreds of gallons per minute.

Then the friction loss per hundred feet is $2 \times 2.537 \times 2.537 + 2.537 = 12.873 + 2.537 = 15.4$ pounds approximately per 100 feet.

The friction loss in 1,000 feet will be 10×15.4, or 154 pounds.

Adding the nozzle pressure, 70 pounds, to this, the engine would have to deliver a pressure of 154 + 70, or 224 pounds.

The other engine pressure would be the same as in Problem 1, namely, 157.5 pounds, as Engine No. 2 is delivering its flow through two parallel 300-foot lines of 2½-inch hose to a 1¾-inch nozzle having 70 pounds nozzle pressure, as in the previous problem.

Classification of Pumpers

To the Editor:

Our department in its official organ makes reference to first and second size pumpers. A 1,000-gallon pumper at 160 pounds pressure is what I understand to be a first size pumper. However, I don't know exactly what a second size pumper is. Is it a 700 GPM at 120 pounds pressure or a 750 GPM pumper at 120 pounds pressure?

A. R. B.

Answer: Fire engines were classified as double extra first size, extra first size, first size, second size, third size in the days of the old steamer. This classification is rarely used today.

The original classification as far as capacity in gallons per minute is concerned, was as follows:

Double extra first size, over 1,200 gallons per minute.

Extra first size, 1,100 gallons per minute.

First size, 900 gallons per minute.

Second size, 700 gallons per minute.

Third size, 550 gallons per minute.

We would say that a first size pumper today would be one which has a capacity of 1,000 gallons per minute, and a second size pumper, one with 750 (or 700 gallons per minute).

The discharge pressure when operating at "capacity" is normally not specified when classing fire engines in the manner above indicated.

Values of "K" for Small Lines

To the Editor:

In your book, "Fire Service Hydraulics" you show how to solve for the value of "K" on 2½-inch hose lines. Will you please advise how you solve for the value of "K" on small lines. I am particularly interested in 1½-inch cotton rubber lined hose, but would also like to have the answer for ¾-inch and 1-inch booster lines.

R. O. M.

Answer: About the simplest way of securing the values of "K" for use on small hose lines is to substitute known values in the formula for engine pressure or nozzle pressure for small lines and solve for value of "K".

As an example: Assume that we want to find the value of K for ½-inch tip on 1½-inch cotton rubber lined hose. Suppose, further, that we have a line of hose 200 feet long and assume the nozzle pressure will be 50 pounds.

Then we proceed as follows:

Discharge from ½-inch tip at 50 pounds per square inch is 52.5 gallons per minute.

The friction loss in 100 feet of 1½-inch hose at 52.5 gallons per minute is 10.15 pounds.

The friction loss in 200 feet will be 2×10.15, or 20.30 pounds.

Engine pressure is equal to nozzle pressure plus friction loss, or 50 plus 20.30, or 70.30 pounds.

Nozzle pressure, as given, is 50 pounds.

The length of the line is $200 \div 50$, or 4.

Then substituting these known values in the formula for engine pressure we get:

$70.30 = 50 \times (1 + 4\,K)$

$70.30 = 50 + 200\,K$

$20.3 = 200\,K$

Then K equals $20.3 \div 200$, or .101.

It is usually best to solve four or five problems taking different nozzle pressures within the usual range of pressure for the size of nozzles considered, and then average the values of K secured from these solutions.

If you refer to the table for values of K for small lines you will find that the value of K for ½-inch nozzle on 1½-inch hose is .104.

Thus you will notice there is a very small error in solving the value of K in the manner indicated above. The error would be still less if we took several problems rather than a single problem, and averaged the values of K so secured.

Incidentally you will find in "Fire Service Hydraulics" tables showing the friction loss in various diameters of hose for various flows as well as the discharge from all sizes of nozzles commonly employed.

September Fire Losses

Fire destruction in the United States during September is estimated at $45,922,000, a decrease of 7.6 per cent from fire losses of $49,678,000, for the same month a year ago, it was announced by W. E. Mallalieu, general manager of the National Board of Fire Underwriters.

The September total was 7.9 per cent lower than August losses of $49,878,000. While this lower figure presents the

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A transformer is available providing 110 volts AC for operation of flood lights, extension lights, electric sheet or other accessories up to 250 watts.

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most hopeful picture of the country's fire losses to date this year, it should not be cause for relaxation of national vigilance against fire since, Mr. Mallalieu warned, it is a usual seasonal decline experienced during August and September. He added that it has made only a slight dent in the unusually high losses for the year which so far has been marked by a steady rise in destruction of property and valuable resources by fire.

For the 12-month period ending September 30, 1950, the total estimated loss is $685,206,000, an increase of 1.9 per cent over losses of $672,654,000, for the 12 months ending September 30, 1949.

These reported losses under fire insurance policies include an allowance for uninsured and unreported losses.

Atlanta Fire

(*Continued from page 897*)

the Junction of Peachtree and West Peachtree Streets traffic was in a tight, tangled mess, police reported. How much of this congestion was due to the continued broadcast reports of the fire is problematical, but undeterred by the rain, thousands of spectators crowded the ropes set up by extra squads of police. Trolleys and motor traffic were rerouted to keep lanes open for fire fighting operations.

Guests of the Hotel Grady were warned over the hotel speaker system to stay away from the windows and rooms on the north side of the building facing the Temple, and many left the hotel to join the crowds of spectators. Others deserted jobs in offices and stores to join in watching the firemen.

Four autos parked alongside the Temple remained throughout the fire notwithstanding frenzied efforts on the part of some of the owners to move them. Firemen did move a truck to permit one frantic motorist to remove his car, which was blocking operations. The other vehicles, together with cars in a rear parking lot, threatened by falling walls, remained.

Georgia Power Company line crews cut energized trolley wires in Peachtree Street to safeguard fire fighters operating on ladders and on the street level.

At 2:30 P.M. the windows on the ground floor stores were still intact, but within an hour later they were blown out and firemen were directing streams into the stores. This marked about the last of the fight. Notwithstanding the several deluge sets operated on the street level, and two on the roof of the J. P. Allen Company store across Peachtree Street, as well as two heavy streams from ladder pipes, together with hand lines operated from the fourth floor of the Hotel Grady, the fire consumed practically everything combustible in the building.

Chief Carpenter's Analysis

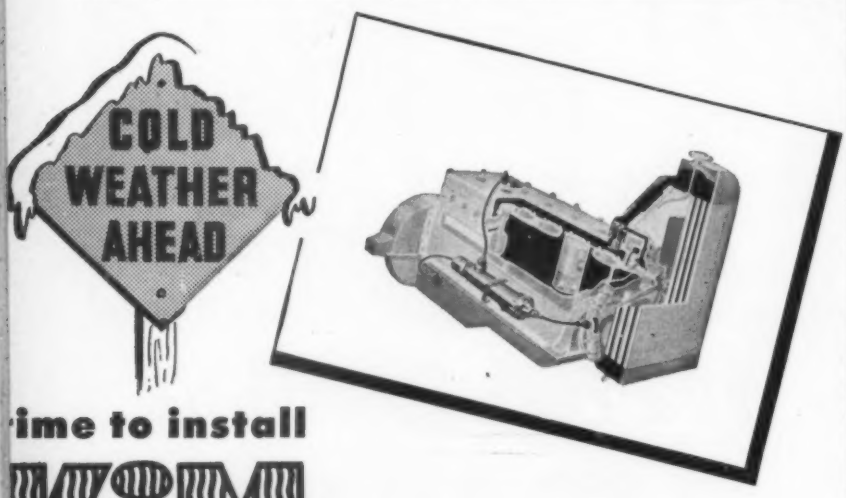
Combine (1) a fire that has gained rapid headway before being discovered with (2) an old multi-storied building with wooden floors and stairways and (3) a windy day, and you'll have a conflagration almost impossible to control until the building has burned down. That's the way Assistant Chief Carpenter, who had charge of fire fighting operations in the absence of Chief C. C. Styron, analyzed the battle. Chief Styron was en route to the San Francisco Convention of the International Association of Fire Chiefs at the time of the fire.

Another factor, commented on by fire fighters at the scene, was the low water pressure particularly during the early stages of the struggle. This is reported to have had some bearing on the inability to get sufficient water on the fire during the 15-minute period in which firemen were able to work inside the structure. One report attributed this shortage to the location of the Temple, which is on one of the highest points of the city, and to the steep grade of Cain Street.

Other contributing factors, beside the high wind, which prevented penetration of fire streams into the building, was the peculiar construction of the building, with its large area auditoriums, balconies, small rooms, open stairs; unprotected shafts; the distance from the fire building of vantage points from which to operate effective streams, and the delayed alarm. These are the factors which combined to place Atlanta fire fighters on the defense almost from the start and forced them to exterior operations.

Casualties among firemen were fortunately few. Five received medical attention: Ewell Vernon Wilson and John Cecil Pope, both received injury to legs; Charles Fred McCravy (Fulton County fireman) knee injury; Randolph Glaze, strains; and Courtland Simmons Askew, injured side.

Early the following morning, two



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Alarms were sounded for a fire in the headquarters of the Carrier Air Conditioning Corp. and Wrenn Brothers, a hoisting equipment firm, located in Ivy Street. At this blaze, some 12 hours after the temple fire, and while some standby units still were guarding the Temple ruins, several more firemen were injured. They were: Albert K. Morris, knocked from a ladder at the third floor level by a wild hose, condition serious; James H. Doyle and Carl McLarty cut hands.

The cause of this fire, which was fought by six companies, is not reported. This fire did only a small amount of damage, the second alarm being sounded as a precautionary measure. The building is a three story brick and basement structure. The fire started in the basement and spread upward through the walls, where it was soon checked. A rekindle of this blaze later brought companies back to the scene after they had returned to quarters.

The chronology of response to the two fires was as follows:

RESPONSE—MASONIC TEMPLE FIRE
Sept. 7, 1950

1:50 P.M.—Telephone alarm: Peachtree St. & Cain St. Engs. 8, 4, 1, 3, 6; Lads. 8, 4, 1; Rescue. Battalion Chief 3, W. A. Fain; Acting Assistant Chief C. W. Poole; Second Assistant Chief M. H. Dean
1:55 P.M.—Second Alarm (by radio) Engs. 5, 11; Lad. 11
1:56 P.M.—Eng. 15 to 11
1:57 P.M.—Eng. 16, Lad. 16 to 3
1:59 P.M.—Eng. 7 to 1
2:00 P.M.—Third Alarm (by radio) Engs. 16, 9
2:05 P.M.—Eng. 10, Lad. 10 to 5
2:06 P.M.—Eng. 17, Lad. 17 to 7
2:07 P.M.—Eng. 19, Lad. 19 to 11
2:07 P.M.—Fourth Alarm (by radio) Engs. 7, 15
2:08 P.M.—Batt. Chf. 2 to 1
2:09 P.M.—Eng. 23, Lad. 23 to 8
2:10 P.M.—Lad. 10 to 1
2:12 P.M.—1st. Asst. Chf. J. W. Carpenter
2:17 P.M.—Eng. 14 to 1
2:22 P.M.—Fifth Alarm (by radio) Engs. 23, 10; Lads. 23-5
2:25 P.M.—Eng. 17, Lad. 17 to 5
2:27 P.M.—Eng. 18 to 12
2:30 P.M.—Eng. 25, Lad. 25 to 17
2:38 P.M.—Eng. 2 to 9
2:39 P.M.—Eng. 25, Lad. 25 to 7
2:40 P.M.—Lad. 7 to 9
2:40 P.M.—Shop Maintenance
2:48 P.M.—Off-shift called in
3:05 P.M.—Fuel and Oil (by radio)
3:31 P.M.—Eng. 22 to 16
5:14 P.M.—Eng. 20 to 14
6:57 P.M.—Special call for light truck (by radio)
7:34 P.M.—Eng. 23 to 3 (Reserve engine)
7:35 P.M.—Special Call Eng. 14 (by radio)
1:08 A.M.—Fire rung out (by radio)
3:20 A.M.—Special Call Eng. 17 (by radio) stand by
8:10 A.M.—Special Call Eng. 4 (by radio) stand by
9:13 A.M.—Special Call Eng. 5 (by radio) stand by

This does not include three other small fires that alarms were received for, which were covered by re-located companies.

Operators McEver and Lemmon.

Ives Street Fire (September 8)

1:48 A.M.—Telephone Alarm—300 Ivy St., N.E. (Carrier Air Contioning Corp.) Engs. 4, 6, 8, 11; Lads. 4, 8; Battalion Chief A. P. Brown (Acting), 1st Assistant Chief J. W. Carpenter
1:48 A.M.—Eng. 5 to 1
1:48 A.M.—Eng. 7 to 5
1:49 A.M.—Eng. 17 to 7
1:49 A.M.—Eng. 25 to 17
1:53 A.M.—Second Alarm: (by radio) Engs. 3, 5; Lad. 1; Rescue; Light Truck
1:55 A.M.—Lad. 11 to 8
1:58 A.M.—Eng. 19; Lad. 19 to 11
2:00 A.M.—Eng. 16 to 3
2:00 A.M.—Eng. 23 to 16
2:01 A.M.—Eng. 7 to 1
2:01 A.M.—Lad. 5 to 1

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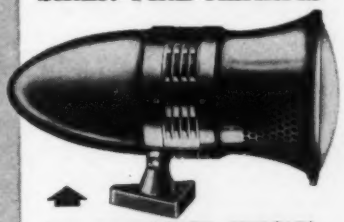

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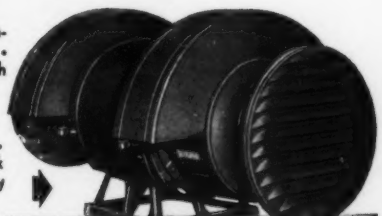

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2:07 A.M.—Lad. 17 to 7
2:07 A.M.—Lad. 25 to 17
2:07 A.M.—Lad. 17 to 5
2:10 A.M.—Batt. Chf. 2 to 1
2:13 A.M.—Eng. 17 to 5
2:13 A.M.—Eng. 14 to 7
4:33 A.M.—Fire rung out (by radio)

Incidental facts of Masonic Temple Fire: Fire streams in operation, 36 in all. In addition to hand lines there were 9 Grant Multiversal pipes and demountable deck guns; 2 ladder pipes. Eight streams were operated from standpipes in the Henry Grady Hotel. Paul Weir, Chief of the Atlanta Water Works, estimated that approximately 2,500,000 gallons of water were used on this fire. Ten first size (1000 GPM) pumpers were in operation. Wind velocity at 2:30 P.M. Sept. 7, 1950: 36 MPH with gusts up to 52 MPH. Responding to the Masonic Temple Fire 15 engines and 6 ladders.

Box 12, Detroit Buffs Club Has New Officers

Box 12 Club of Detroit is one of the oldest and best known of the nation's buff's clubs. For 23 years its "chief" and guiding genius has been Paxton Mendelssohn, who helped found it and who for the past few years has enjoyed the added distinction of being a Detroit Fire Commissioner.

On October 25, 1950, the Club convened to hold its first election of officers since Pax, as he is affectionately known, took the reins. An entirely new slate was named by a committee of five of the older members appointed by Chief Paxton months ago, and installed for a three-year term of office.

These new officers are: Chief—C. Gilbert Waldo, prominent Detroit insurance executive and a former national golf champion who, according to his associates, is "just a blue shirt at heart"; Assistant Chief—Gordon C. Graham, for four years assistant or acting secretary; Superintendent of Safety Education is the Detroit Public Schools—another died-in-the-wool buff; Treasurer—Lansing (Lanny) Pittman, young socialite but long-time friend of the fire service; and Commissary Steward—James F. Whitehead, Jr., also young as buff's go, but full of the same stuff that breeds buffs.

Box 12 emerged from the blueprint stage in 1926, when Paxton Mendelssohn became its chief. Its deputy chief was the then commissioner Heyward Murphy, since deceased. The office was never filled thereafter until the present. Harry Shearer was the original secretary and Bob Loughead of the Michigan Inspection Bureau was the original treasurer. Then, and until now, the group met in a room over Paxton's garage, where curious and other "memorabilia" of the fire service were collected and cherished.

New Club quarters are contemplated now that the group has outgrown its present rooms. Eventually the memorabilia will be moved to a permanent home over the office of Commissioner Ludington (buff and fire commissioner).

Additional steps to further advance the Club include the installation of a short wave radio which will pick up the air wave communications of the fire department and a revision of the by-laws, with the ultimate objective of adding a few additional hand-picked buffs to the roster.

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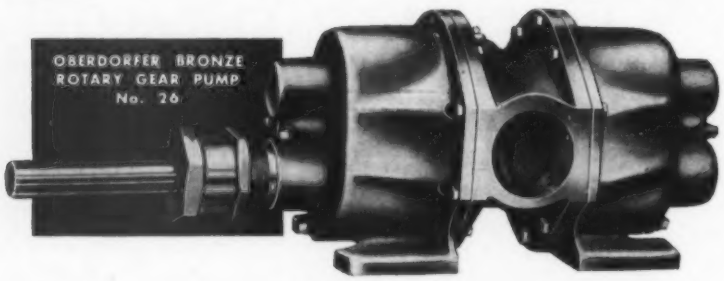

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Obituaries

Chief J. T. Keegan Dead

James T. Keegan, superintendent of the Newark, N. J., Salvage Corps, died October 18 in St. Michael's Hospital after an illness of almost two months. On August 25 he suffered a heart attack while on duty at corps headquarters. A lifetime resident of Newark, Chief Keegan was 63.

Chief Keegan had been associated with the Salvage Corps for more than 38 years. As the era of the horse-drawn fire wagons faded, he was appointed a substitute patrolman of the corps July 1, 1912. He was made a patrolman January 1, 1913; a second sergeant September 13, 1918 and assistant superintendent July 1, 1919. He had been superintendent since 1928.

In 1937, after 25 years of service, Chief Keegan estimated that he had responded to 50,000 alarms. Since becoming superintendent, he has been credited with having done much to elevate the corps standards which have been used as a model throughout the country.

Chief Keegan was a corps driver in the days when the salvage men frequently beat firemen to fires. He drove some of the corps' first five cars.

Educated in St. Aloysius Parochial School, he became well known as a basketball player in the city and continued playing until he entered the corps.

Upon leaving school he became a foundry molder, but he decided fire fighting was his business. He submitted

his application for a job with the corps and was temporarily appointed for three months. At the expiration of the three months, he was asked to remain on duty.

Chief Keegan was a member of the International, Eastern and New Jersey State Associations of Fire Chiefs, the Paid Fire Chiefs Club of New Jersey and Newark Aerie of Eagle.

For several years he served as Chairman of the Exhibit Committee of the International Association of Fire Chiefs.

Charles Dawley, Ventura Chief Dies Suddenly

Fire Chief Charles E. (Chuck) Dawley, 42, for more than 12 years head of the Ventura, Calif. Fire Department, died unexpectedly of a heart attack October 3, 1950. A fire department resuscitator unit, with which Chief Dawley had served in his 22-year fire service career, was summoned but he was beyond aid. It was disclosed that the Chief spent the evening before his death working with other firemen in the firehouse garage on recharging fire extinguishers for use at a forthcoming Ventura county fair. According to the press, "he was exposed to carbon tetrachloride fumes for some time despite fire department precautions, and this exposure caused considerable discomfort to most of the members of the working party."

Chief Dawley took over the post of head of the department in 1938, succeeding the late H. A. Johnson. He saw his department grow from six men in 1938 to 18 paid men at his death. The new Ventura central fire station, which has attracted wide interest, was the realization of one of his most ambitious hopes.

In the last war he served as one of five men on the governor's committee for fire defense. A native of Pennsylvania, he entered the department in 1928, became a regular paid fireman in 1929, was appointed captain in 1936 and made chief a year and a half later.

Fire Marshal Hofstetter Dies

Albert N. Hofstetter, 71, for 36 years fire marshal of the Evanston, Ill., Fire Department, died September 24, after a long illness. He had been a member of the department since 1901 and was always in attendance at State Firemen's Conventions and the Annual Fire College.

Chief Stanley Tastad Dies on Bus

Fire Chief Stanley (Pete) Tastad, 50, head of the DeKalb, Ill., Fire Department for 10 years, died while on a Greyhound bus bound from Chicago to DeKalb, last month.

Chief Tastad, who had never been ill before, was striken as he returned from Chicago where he had been making regular trips to discuss purchase of new fire apparatus. He was discovered dead when the bus stopped at DeKalb.

Tastad had been a member of the department for 24 years; he became chief in 1940, replacing former chief William Wall. Before joining the department he was a motorman. He was a member of the Illinois State Fire Inspectors Asso-

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ciation, the International Association of Fire Chiefs, the Masonic Order, Elks Lodge and Eagles lodge. Surviving are his wife, three sisters and two brothers.

Persons in the News

W. E. Mallalieu to Retire Dec. 31

W. E. Mallalieu, the "grand old man of the fire insurance business," who has been associated with the National Board of Fire Underwriters for 50 years, and its general manager since 1910, will retire from active duty with the National Board on Dec. 31, 1950, it was announced Oct. 13 by W. Ross McCain, president of the Board.

W. E. Mallalieu

He will be succeeded by Lewis A. Vincent, who has been head of the National Board's Actuarial Bureau since 1945. Mr. Vincent, a West Point graduate, has been associated with the Board, since 1929 and served as assistant to the general manager from 1942 to 1945.

"For a round half century Mr. Mallalieu has been one of the most constructive and beneficial influences in our business," said Mr. McCain. "He has been a leader in the expansion of the public services of fire insurance through the National Board and other organitions such as the world renowned Underwriters' Laboratories, Inc.

"High standards of fire protection and fire safety are due in large measure to his vision, foresight and energy through the past 50 years. The fire insurance business and our nation have been fortunate in having a man of his extraordinary ability devote these many years to saving lives and improving the public services of the fire insurance business to the public.

"We are fortunate in having as his successor a man trained by him on his high standards and sharing his high ideals."

Mr. Vincent was born in Meriden, Conn., in 1905, and attended Wesleyan University, Middletown, Conn., before his appointment to West Point. During the war he was advisory fire protection engineer and consultant to the War Department in Washington, D. C. Since 1945 he has been in charge of the National Board's Actuarial Bureau,

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which gathers statistics on fire losses and fire insurance for member companies, State insurance departments and fire marshals.

Mr. Mallalieu joined the National Board of Fire Underwriters on Dec. 9, 1900, when the organization had only six employees. His first duties were those of an electrical inspector. Under his direction the National Board has become one of the nation's leading public service organizations, with its engineering, research and testing activities devoted to improving the fire protection of the nation. Its membership comprises 200 capital stock fire insurance companies and it has 365 employees operating from its New York, Chicago and San Francisco offices.

Lewis A. Vincent

He was born in 1874 in Jersey City, N. J., in the Mallalieu family homestead which still stands. He attended Hasbrouck Academy, Jersey City, and later attended Wilbraham Academy, Wilbraham, Mass. Although 59 years have passed since his graduation, his interest in Wilbraham has never weakened. For the past 30 years he has been a member of the board of trustees and for 8 years he was president of the board.

In 1897 he was graduated from Stevens Institute of Technology in Hoboken, N. J., as a mechanical engineer. He worked for the Worthington Pump Co. and the Western Electric Co. before joining the National Board of Fire Underwriters in 1900.

For six years he served as an electrical inspector in the suburban field. His territory was extensive for horse and buggy days; he covered Long Island, Staten Island, Westchester, Rockland and Putnam counties in New York State and Northern New Jersey. In 1906 he was placed in charge of the National Board's engineering department, and in 1910 he succeeded the late Henry K. Miller as general agent. Later the title was changed to general manager.

Under Mr. Mallalieu's direction, the National Board has widened its activities to cover almost every phase of the fire prevention and fire insurance field. The engineering surveys of American cities, to detect conflagration hazards, which were started after the Baltimore conflagration of 1904, have been expanded; at present 470 U. S. cities are inspected periodically by the Board's engineers. An arson department was

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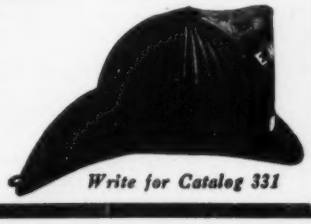

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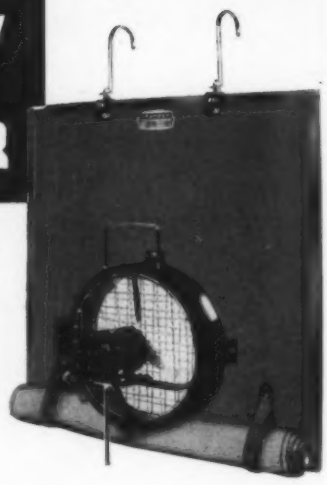

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I. H. CASE, Business Manager.

Sworn to and subscribed before me this 27th day of September, 1950.

(Seal) WILLIAM H. TOPHAM, Notary Public.

(My commission expires March 30, 1951)

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WE ARE DISTRIBUTORS FOR

SIREN BOOTS

We have been supplying **FIREMEN'S CLOTHING** for over 25 years.

Any fireman can have a catalog by writing —

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ST. JOSEPH - - MISSOURI

organized and now has special agents in all 48 States to cooperate with local officials in investigating incendiary and suspicious fires.

A law department, which keeps track of legislative matters affecting fire insurance, an actuarial bureau which gathers statistics on the hundreds of thousands of fires occurring annually, a research division which studies new fire hazards in industry, and a public relations department which disseminates information on fire prevention and insurance to the public have been been organized under his direction.

He has been a force in the promotion of better building construction throughout the country. Under his direction, successive editions of the National Board's model building code have been published, the latest being in 1949. This model code, the first published in America, has been the basis for the building laws of most U. S. cities. During the past year he has taken the leadership in bringing together the sponsors of other model building codes in an effort to get wider agreement and unification on building code principles.

He directed the organization of the National Board's Committee on Adjustments, which has played an important role in the arbitration of differences over claim settlements by insurance companies. He developed the National Board's "Catastrophe Plan," a procedure enabling fire insurance companies to bring quick aid to stricken communities after major disasters such as explosions, fires and hurricanes. The "Catastrophe Plan" was used with great effectiveness after the Texas City explosion of April, 1947, when more than 3,000 property owners suffered losses.

Served in Both World Wars

In both World Wars, Mr. Mallalieu served his country as a dollar-a-year man, bringing his specialized knowledge of fire protection to help safeguard the nation's military and naval establishments. In World War I he was affiliated with the Fire Prevention and Protection Division of the War Industries Board. In the Second World War he directed fire prevention and protection for the Corps of Engineers of the War Department; the Bureau of Yards and Docks of the Navy Department; and the Fire Protection Division of the Coast Guard.

For 40 years he has served on the Board of Trustees of Underwriters' Laboratories, Inc., the non-profit testing organization sponsored by the National Board of Fire Underwriters, and he is secretary of its investment and banking committee. He is also a director of the Sanborn Map Co., which prepares maps widely used in the insurance business

He is a past president of the National Fire Protection Association, serving in 1921 and 1922. He is an honorary life member of the International Association of Fire Chiefs and carries the badge of an honorary deputy chief of the Jersey City, N. J., fire department.

Mr. Mallalieu married Grace Emory Tilden in 1905 and they have two sons, both in the insurance business. Wilbur E. Mallalieu, Jr., is with the Glens Falls Insurance Co., Glens Falls, N. Y., and John T. Mallalieu is with the Fidelity and Casualty Co., in New York City.

Chief Jos. A. Kirby Retires

Joseph A. Kirby, for 42 years a member of the Dayton Fire Department, and for the past 11 years its energetic head, retires on November 16 for reasons of health. The 78-year-old veteran fire fighter voluntarily took the step to "give him a chance to relax and build up his health, and play with his grandchildren."

Chief Kirby saw the Dayton Fire Division grow from the era of the horse-drawn steamer and meager facilities to its present state symbolized by mechanized equipment, scientific fire-fighting methods and a well-trained force of 300 men. His mind kept pace with the developments, and he has pioneered not a few of them. During his era as chief, Dayton acquired a high order of fire protection as evidenced by the city's low insurance rates and the esteem with which the department is held nationally as well as locally.

Chief Kirby was appointed fireman-engineer in April, 1908, advanced to lieutenant in March 1918, to captain in January, 1920, and district chief in December, 1923, in which capacity he served until his promotion to chief in 1939.

Professionally, Chief Kirby is past president of the Ohio Fire Fighters, prominent in the International Association of Fire Chiefs, and active in the Central Western Firemen's Association. He is married and, with Mrs. Kirby, celebrated his 50th wedding anniversary in February, 1948. They have four children.

Chief Kirby's successor will be named soon, according to City Manager Russell E. McClure. Assistant Fire Chief Forrest B. Lucas, who has been acting for Chief Kirby at recent meetings of the City Commission and staff conferences, is in line for the promotion. So too, is Assistant Chief Lowell Fulford another veteran of the service. Lucas is a veteran of World War 1, and, with Fulford, was made assistant chief in 1948 when two such posts were created.

Chief Krusenklaus Lauded

It isn't often that local newspapers devote large space to eulogizing their municipal fire chiefs while the latter are still alive. Usually they have to die before they receive the flowers—if they receive them then.

An exception is the Louisville Courier-Journal, one of the nation's leading newspapers, which recently ran a feature story about Louisville's Fire Chief "Colonel" John Krusenklaus.

Krusenklaus is no armchair chief and his enterprise has resulted in a sharp cut in insurance rates and the upping of the City to among the first 10 of the 3000 municipalities in fire prevention and protection for the past 15 years.

The present Chief joined the department in 1934, within a year being sent to the Kentucky fire school and then to Detroit to study model fire prevention methods. After that came the first real efforts to educate local citizens to stop fires before they start. He organized the first fire prevention bureau and started the inspection of buildings on a broad scale. In 1949 the Bureau made 6,792 inspections, investigated 309 fires of unknown origin, issued 1448 orders for removal of hazards, and supplied evidence for prosecution of 59 violators of fire regulations.

When Krusenklaus was promoted to

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A LOW FIRE LOSS RECORD
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FULTON *Shuredry* GREEN-BAK SALVAGE COVERS

Specially treated to resist water seepage or penetration, pliable, easily handled and long lasting, Shuredry Covers are a protection you can depend on — an investment to *cut down fire losses*. Specify Fulton Shuredry Green-Bak Salvage Covers on your next purchase. Order from your fire equipment dealer.

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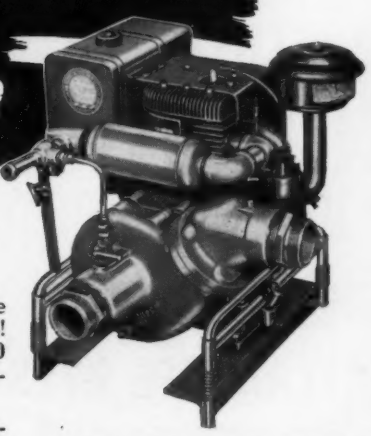
The DUAL FIRE FIGHTER



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Water starts flowing **in 15 to 30 seconds,** by means of a simple exhaust primer.

Save the big pumper possible costly damage in trying to reach isolated water supply.

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DAVY *automatic*
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The "DAVY" is 100% automatic — requires no manual manipulation. There is no upkeep — it will not deteriorate — needs no mechanical adjustments — will not get out of order. The brake mechanism is sealed in a round container about 6" by 2", with steel-cored cord neatly coiled below the container. *Davy's have been in service for over 40 years.*

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The fire service prides itself on buying "the best," everytime. *INSIST on ATLAS*—everytime—and you'll get the *best* life net!

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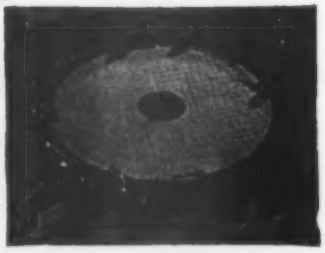

ATLAS SAFETY EQUIPMENT CO., INC.
27 WARREN ST. NEW YORK 7, N. Y.

assistant chief in 1941 and then to chief in 1943, he continued to devote much of his time to fire prevention. The story then goes on to recount how the chief is "all business"—sticks on the job, passes up vacations and sports, and lives a sort of nomadic home life—all for a salary at least $1200 less than the average for chiefs of departments for cities the size of Louisville.

Chief Berkholtz Retires

Assistant Fire Chief W. C. Berkholtz, for 42 years a member of the Fresno, Calif., Fire Department, retired from active duty on his 74th birthday, Nov. 16th last.

Chief Berkholtz joined the department in 1908 as extra man. Three years later he became in rapid succession acting lieutenant, lieutenant and acting captain. In 1913 he was advanced to assistant chief.

Chief Berkholtz was appointed Fresno's first fire marshal, creating the fire prevention bureau. He developed the Fresno type of fire hydrant and a new type nozzle shut-off, together with a clip and metal strap device for securing equipment to fire apparatus, doing away with the old buckle and strap.

One of the Chief's sons, Helmer, was killed in a fire apparatus accident in 1943. The chief plans to follow his hobby of horticulture, in his leisure days.

Fire Service Ladders and Their Use

(*Continued from page* 899)

with sand bags) is 650 lbs. for this type of manufactured steel aerial ladder.*

This load should be used on any ladders that have rung braces on all sections. All 85 ft. and 100 ft. rescue ladders, also 65 ft. and 75 ft. ladders of this make shipped after June 1, 1943*, have the rung braces on all sections. By "rung braces" are meant diagonal braces that extend from the underside of the rungs to the side rails.

To test any steel ladder without rung braces, the test weight including the equipment, such as cables, etc., will be approximately 335 lbs. The above load should be allowed to remain on the ladder for a period of five minutes.

It is realized that it will not always be possible to procure test equipment such as is described herein and it may be necessary to improvise, using the material that is available, but it should not be too difficult to adhere to the general practice laid down. In some cases it may be advisable to test with water and some sort of drum will have to be improvised; at other times sand bags may have to be used—but whatever is used, every effort should be made to stay within the weights listed above for the various ladders and bear in mind those weights are to include the test equipment.

1. After locating the truck on level surface or road, see that all ground jacks are down and have a firm footing on the ground. The aerial platform must be on the level.

2. With the ladder supported by the truck arches, extend the sections fully to the rear. On tractor-drawn aerials, it will be necessary to erect a support above the arches so that the ladder will

*American LaFrance-Foamite Corp. multi-section steel aerial models.

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5" TRUE parabolic, silver plated reflector; 25,000 c.p. beam; 1/3 mile range; sturdy metal case; corrosion proof terminals.

Only 72 ounces. Will not spill in ANY position.

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MASTER-LIGHT for FIREMEN
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STOP PROPERTY DAMAGE AFTER THE FIRE IS OUT WITH SPRINKLER STOPPER

Instantly stops further damage by water after the fire is out. Rest of the building protected in case of further outbreak.

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Give
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Make your next coat "Janesville" and specify "Scotchlite" trim. Either rubber or duck coats are available with "Scotchlite" trim for your protection.

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HONOR ROLLS
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clear the tiller windshield and tiller steering wheel.

3. Secure a 50 lb. weight to the rear end of the ladder on the second or third rungs from the top end of the top section.

4. Measure the distance from the underside of the rear rung to the ground. This measurement should be taken midway between the ladder rails (see Fig. I). Mark the point on the ground where the measuring tape or rule touched.

5. Retract the sections fully, then attach the special testing bracket (Fig. II) and cable to the top section top rung.

6. Elevate the ladder to 60 degrees, rotate the turntable until the ladder is in a central position over the front end of the truck, then extend the sections (fly) until they are five (5) ft. short of full extension. Have the ladder section locks in the "on" position bearing on the rungs. Close the cylinder shut-off or safety valve tightly. Check to see that the ladder is straight (no lean to either side) before adding any load.

7. Secure the special testing equipment, that is, water tank garden hose, etc. (Fig. III) to the cable. Have about 42 in. between the tank bottom and the ground before adding any water.

8. Add water to the tank until it runs out of the lower level hole. Inspect the ladder to determine the advisability of continuing the test before adding any more water. Ladder should be straight with no lean to either side. Add water until it runs out of the next higher level hole, then inspect the ladder before continuing the test. Follow this procedure until the tank overflows (Fig. IV).

9. The maximum load is attained when the tank is overflowing. Keep the maximum load for five (5) minutes.

10. Allow the tank to drain to its lowest level, then remove it from the cable.

11. Extend the sections so that the locks may be released, then retract the sections fully. Open the cylinder shut-off or safety valve and rotate the ladder until it is central on the truck pointing toward the rear. Lower the ladder until it rests on the truck arches. Remove the cable and special testing bracket.

12. With the ladder supported by the truck arches, extend the sections fully.

13. Measure the distance from the underside of the rear rung to the ground (Fig. I). This measurement should be taken midway between the ladder rails to the marked point on the ground.

14. If the distance measured under #13 is within plus 2 in. or minus 2 in. of the distance measured under #4, the ladder is in a satisfactory condition for continued use.

15. Inspect the underside of the ladder rails to be sure there are no indentations where side rails rested on rollers during the test.

Alameda Takes Honors

The Alameda, Calif., Fire Department chalked up new honors for the third consecutive year when it took first place in the National Board of Fire Underwriters' fire prevention contest for the state, Chief Thomas M. Lane reports. The department also won a certificate of honor from the United States Chamber of Commerce.

Commenting on this fact, Chief Lane pridefully boasts that his 76-man fire force keeps in condition through daily training in fire fighting and rescue techniques at the departments drill tower.

HALE Type FZZ
• Quick-Starting • Portable
• Compact • Powerful
• Versatile

Above—Frame-mounted FZZ can be easily carried by two men. It is also available mounted on rubber cushioned steel channels, or on two truck-type wheels.

Fire Companies frequently write us telling of the many practical ways they use their portable Hale type FZZ, such as the following:

- For fighting field or forest fires from moving trucks.
- For "wetting down" and standby use, thus releasing major equipment.
- For pumping out flooded cellars and elevator shafts after fire, flood or other emergency.
- For relaying water to pump or booster tank from sources inaccessible to major Fire Pumpers.
- For factory protection in fighting fires before major equipment arrives.
- For fighting oil or other type fires requiring foam. (Built-in foam proportioner available when specified.)

The FZZ will supply from draft, 60 GPM at 90 lbs. pump pressure; and 150 GPM at 30 lbs. Can supply two capable streams through 1½" lines, using nozzle tips up to ½".

Note: Discharge Adapter can be supplied for use with 2½" fire hose.

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HALE FIRE PUMP COMPANY
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The following letter speaks for itself:

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(F. E. Boren, Chief, Fire Dept., Silver City, N. M.)

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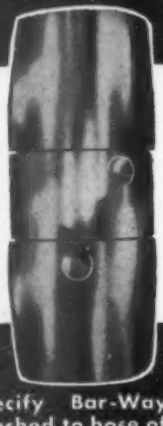
BAR-WAY HOSE COUPLINGS

FOR ¾" AND 1" BOOSTER AND HIGH PRESSURE FOG LINES



STREAMLINED
FULL FLOW
INTERNAL EXPANSION
ACCURATELY MACHINED
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For maximum efficiency, economy and protection specify Bar-Way couplings attached to hose of proper size. Endorsed by leading hose manufacturers and demanded by more and more fire departments.

BAR-WAY MFG. CO., STAMFORD, CONN.

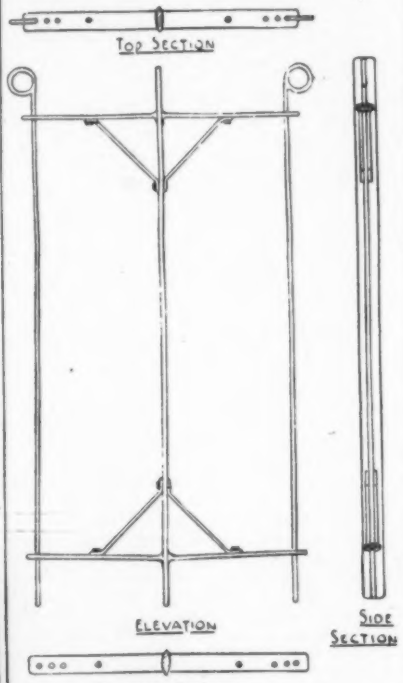
WEST COAST REPRESENTATIVE:
W. D. RIGDON
382 Bryant Street San Francisco 7

Short Cuts and Gadgets

(*Continued from page* 912)

stowage and operational efficiency, it was apparent that the following additional requirements were necessary: (1) simplicity in design and operation, and sufficiently robust to outlive rough treatment; (2) light in weight; cheap enough to permit of mass production if desired and easy to replace.

The metal used in all experiments was scrap airplane strutting, and it proved to be entirely suitable in strength, weight and cheapness.



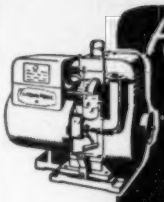
Construction Details of "Line Former."

The "line-former" consists of a center, or main, member 24 inches long and elliptical in section, one inch wide by ¼-inch at the centre. The line bearers, made in one piece, measure 12½ inches overall by seven-eighths inch by three-sixteenth inch at the centre.

The main member is slotted at two inches from either end to receive a corresponding slot in the bearer middle, giving approximately six inches each side of main member. The joint is then brazed; this makes the whole article solid throughout.

The bearers are not directly at right angles, but are "toed" in a quarter-inch to allow the line to fall freely from them when the pin is withdrawn. At the extreme end of each bearer are three-quarter-inch adjusting holes. Set one above the other at half-inch centres, they house the securing pin, a quarter-inch welding rod 24 inches long. This enables various lengths of line to be compactly made up. Angle stays support the bearers on the inner side, but it has been found in practice that the fitting of these is optional if metal, similar in characteristics to the airplane strutting, is used.

In making up a line on the "former,"



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See your local Fairbanks-Morse dealer about installing a dependable generating set! He can supply generators in capacities from 600 to 35,000 watts—A.C., D.C., or A.C.-D.C. If you don't know the name of your nearest Fairbanks-Morse dealer, write today to Fairbanks, Morse & Co., Chicago 5, Ill.

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Diesel Locomotives and Engines • Electrical Machinery
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INVINCIBLE NOZZLES

Fireboat Tower Nozzle

with full Transverse Control

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"ALL AMERICAN CHOICE"

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Latest Design

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Add this light weight portable flood light to your lighting equipment. Burnished cast aluminum lamp housing and base. Hubbel twist lock male connector in base. Mogul 300 watt floodlight bulb with heavy gauge wire guard. Weighs only six pounds. Use with your 110 volt generator, or plug into a neighboring house outlet for plenty of light at every fire.

Ask your dealer to order Arguslites.

ARGUSLITE CO.
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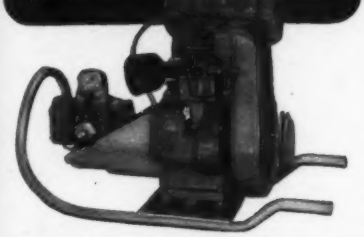
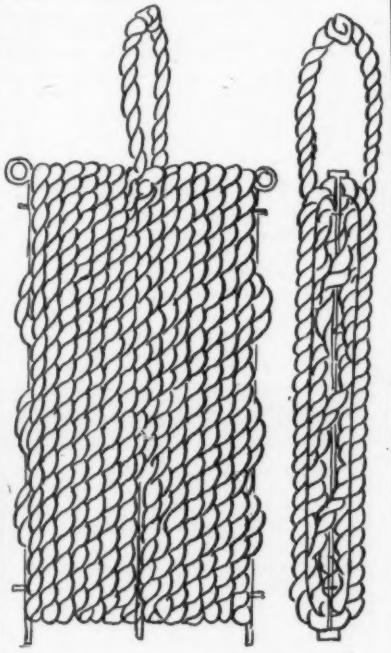
— AMERICA'S "No. 1" PORTABLE FIRE-FIGHTER!



Powerful, dependable, and easy to transport, Pacific Pumpers conform perfectly to fire protection needs in forests, industries, resorts, small communities. The Model W, most recent addition to an extensive line, is powered by a 4-cycle air-cooled engine, delivers 14 g.p.m. at 300 p.s.i. or 22 g.p.m. at 50 p.s.i., weighs only 90 lbs. Write for helpful literature on portable pumpers, and catalog of hose, nozzles, fire-fighting accessories.

PACIFIC *Marine Supply Co.*
FIRE EQUIPMENT DIVISION
SEATTLE 1, WASHINGTON

the following procedure should be adopted:—Place the middle of the line across the end of the main member of the "former" so that half of the line is on each side of the "former": leaving sufficient slack, in the centre of the line, to enable the line to be carried when made up (a 6-inch bight is sufficient); cross the line over the main member and then wind it around the bearers. Care should be taken at this stage to ensure that the turns are put on neatly and free from kinks and turns. When the top of the bearer is reached (seven turns in the case of 120 ft. line) the line is carried to the bottom and the process repeated, keeping the second row of turns exactly on top of the lower turns and not between. The securing pin is then placed in position and the running end of the line wound around the pin.



Line in Position on "Line Former."

One half of the line is now made up. The "former" is now turned over and the line placed on in the manner just described. Remember that the first turns on both sides of the main member must cross it. This is to prevent the centre turn of the line being dragged from position by rough treatment.

Advantages of carrying a line made up in this manner are: Neat and tidy in stowage; does not foul other lines, or gear; easy to handle; withstands rough treatment; both ends or middle are instantly available; and efficient in operation.

Dealing with the last, and most important, of these features, that is efficiency in operation, it will be readily appreciated that the made up line presents a neat and compact job that is very simple to operate.

For example, if it is desired to work with one end of the line only, then by simply removing the pin, the running end of one half falls free. The end can then be got to work leaving the remainder of the line neatly made up and out of the way.

THIS BOOT MAY SAVE YOUR LIFE!

U. S. ROYAL FIREFIGHTER BOOTS

- Extra reinforced ladder shank
- Wide skirted top pulls on or off, FAST
- Extra supple rubber rolls down comfortably
- Rubber yank-hooks
- Boot lining and insole of soft, warm felt
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- High-visibility, white, anti-skid, cleated, sole and heel
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U.S. ROYAL FIREFIGHTER COATS

100% waterproof coats of sturdy black rubber with warm, maroon napped lining. Roomy, 2-piece body, raglan shoulders; fly front with instant snap and dee fasteners; roomy outside patch pockets. No stitching in main body; seams cemented, outside gum-strapped. Fully vulcanized after making.

US ROYAL FOOTWEAR

UNITED STATES RUBBER COMPANY
Rockefeller Center, New York

If it is necessary to throw one end of the line from a window, or from a roof, the operator holds the "former" upright, withdraws the pin, and holds the "former" out of the window, or over the edge of the roof. The line then "shoots" from the "former" and, unless it fouls a projection, falls evenly to the ground, because there are no crosses anywhere in the line to cause fouling.

For rescue work inside a building, the middle of the line, naturally, will be required. One half the line can be "shot" through the window in the specified manner, while the other half is taken off inside the building. The middle is then free for rescue work.

Because of the simplicity in design and in operation, very little training is required to familiarize personnel with all aspects of the "former," which has been provisionally patented.

News of the Manufacturers

(*Continued from page* 910)

other tanks immediately surrounding the inflamed tank.

Installations of the nozzle have been made in new-type soya bean, cotton and linseed oil extraction plants where hexane and other explosive solvents are used. Chemical plants producing explosive gases and liquids have protected their manufacturing and storage facilities with these devices. Roofing plants have protected their asphalt saturating vats and automobile plants have utilized the sprays to guard their lacquer and dip tank operations.

Country-Wide Service System for Pyrene

Organization of a nation-wide system of service depots has been completed by the Pyrene Manufacturing Company, of Newark, New Jersey, makers of hand extinguishers and other fire-fighting equipment.

"We have set up 180 of these depots in key cities throughout the country," said George H. Boucher, vice-president of Pyrene, in announcing the services for fire extinguisher owners. The services offered include immediate exchanges, replacement parts, repairs and trade-ins.

Certain extinguishers that can be repaired may be turned in for immediate replacement by the service depot with factory rebuilt extinguishers. Without this service the owner would either need to purchase extra extinguishers or be without this protection while extinguishers were undergoing repair. It also assures him of factory-quality rebuilding.

Common replacement parts for various types and sizes of soda-acid, foam and cartridge-operated water and anti-freeze types are now carried in stock.

Preventing Hydrants from Freezing

A new method of keeping fire hydrants from freezing during the rigors of a New England winter has been reported by Ernest E. Lothrop, municipal manager of the Village of Middlebury, Vermont.

Mr. Lothrop used a mixture of salt and water to which was added a small quantity of Banox, a rust-inhibiting chemical produced by Calgon, Inc., Pittsburgh. His results through last winter were so satisfactory that Mr. Lathrop plans to continue use of the same mixture this year.

This application occurred to Mr. Lathrop after successful use of Banox as a rust-inhibitor for use with salt in melting snow and ice on the highways. Middlebury is one of more than 100 communtities that use Banox with their deicing salt, to avoid corrosion damage to vehicles using the highways, as well as to avoid corrosion of bridges, etc.

Mr. Lathrop wrote to Calgon, Inc., inquiring as to the desirability of using a combination of salt, Banox, and water to keep the hydrants from freezing, saying that salt alone with water was not good as it caused rust. He pointed out that the inside of a common hydrant contained both iron and bronze and leather or rubber gaskets.

Chemists of the company recommended use of a 22 to 23 per cent solution of rock salt, achieved by dissolving 225 pounds of salt in a gallon of water, with the use of about ½ to 1 ounce of Banox per gallon. For convenience, they suggested that the Banox be dissolved in the water before the salt was added.

Such a solution, they pointed out, would have a freezing point around 5° below zero Fahrenheit, which is about as low as can be obtained with salt.

Before using the mixture on hydrants, Mr. Lathrop tried it in a metal barrel that had previously been used for asphalt.

"We burned the asphalt out thor-

Rate $8 per inch less 10% for three or more consecutive insertions.

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Closing date for copy 25th of month preceding date of issue.

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DODGE POWER WAGON—4 WHEEL DRIVE

DIAMOND T—FLOOD LIGHT

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H. & H. TRUCK TANK CO., INC.
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Urbana, Illinois, Fire Chief is retiring due to poor health.

Only experienced man desired, under 45 years of age, with leadership and fire fighting abilities.

$300.00 per month—must pass Civil Service requirements.

Write: MAYOR, Urbana, Illinois

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ALL FIRE DEPARTMENTS

Black Rubber Coats—Turnout Coats—Factory Repaired—Torn Boot Tops—Replaced like new—$4.00 Pair. Save Money—All work guaranteed—Freight paid one way.

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40 Union Square, New York 3, N. Y.

READ THIS

If you are between 45 and 55 years of age, and are a retired fire chief, superintendent, or captain, and are interested in selling fire alarm systems, please write to Box 205, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

FOR SALE

20—3½-gal. C.T.C. fire extinguishers on wheels. Popular Brands. All in 1st class condition. Less charges. Shipped prepaid, $37.50.

CARL RICHTER
716 Seiler Ave.
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FOR SALE

American-LaFrance 1000 gallon pumper. Engine overhauled and all bronze pump rebuilt this year. Good paint and pneumatic tires. Must be inspected to be appreciated.

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WANTED

Dealers in Mid Atlantic and Eastern States. To sell a complete, high grade line of Fire Extinguishers and Fire Department supplies. Needed full or part time. Prompt delivery. Write to Box 185, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

FLASH!!

We have available 110,000 feet of 2½" Double Jacket Fire Hose, and 284,000 feet of 1½" Single Jacket Fire Hose, from Government Surplus, at extremely low price. Guaranteed unused, sent on approval.

2½" Size, Packed 5 lengths to case.. 69¢ a ft.
1½" Size, Packed 10 lengths to case.. 39¢ a ft.

GORHAM FIRE EQUIPMENT CO.
30 India Wharf
Boston 10, Mass.

WANTED

Dealer—Distributors to sell fire apparatus manufactured by well-known Factory. Also popular line of high grade fire hose. Prompt Delivery. Attractive proposition. Address Box 15, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

POSITION WANTED

Fire Protection Field—in Municipality or Plant. 26 Years of Experience in Fire Engineering, Fire-Fighting, Fire Prevention, Maintenance Supervision and Personnel Training. Age 48, Married, unlimited references. Write to Box 200, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Kindly mention FIRE ENGINEERING *when writing advertisers*

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WHERE YOU NEED IT!

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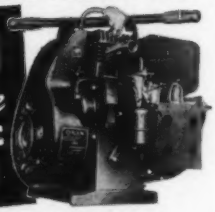

EASILY CARRIED
Lightweight and compact, Onan Electric Plants can be hurried to the spot where needed. Supply current for floodlights, electric saws, drills and other tools. Always ready for instant use.

FIT INTO SMALL SPACE
Compact, self-contained Onan Electric plants can be ordered as standard equipment with many makes of new fire trucks. Just a few square inches of mounting space required for installation on old trucks.

Write for FREE Folder!

New folder shows many lightweight models for fire department use. D.C.: 1200 to 5,000 watts. A.C.: 350 to 3,000 watts. Large plants for emergency operation of signal systems to 35,000 watts.

Onan D.W. ONAN & SONS INC.
5676 Royalston Ave., Minneapolis 5, Minn.

oughly so we were sure we were down to the metal, and then scraped it and scratched it to break through any surface film that might be left," Mr. Lathrop said. "This barrel stood around with this mixture most of the winter and as nearly as we could ascertain, it did not rust."

Encouraged by the early results of this test, Mr. Lathrop had the same mixture used in the hydrants all last winter.

"We have had no trouble with our hydrants since then, so I am assuming that the mixture caused no damage to either metal or gaskets," Mr. Lathrop states.

Chain Saw—Good Rescue Tool

Power cutting and breaking tools are 'musts' on modern well-equipped fire department rescue units. And science is helping the fire service by continually improving such equipment.

As an example, take chain saws. Some of the most modern are made by Henry Disston & Sons, Tacony, Philadelphia 35, Pa., and are practically "portable saw mills" themselves. There are different types, but the one-man operated, gasoline powered types have particular appeal to the fire service for forcible entry, rescue, overhauling and general utility applications.

For those interested, Disston have issued a large attractive descriptive catalog.

Fundamentals of Fire Extinguishment

An educational booklet on fire, suitable for distribution to fire protection personnel, has been published by Ansul Chemical Co. "Fundamentals of Fire Extinguishment" is a 4-page illustrated discussion of what fire is, classes of fire and proper methods of extinguishment.

Originally introduced as an aid in training salesmen, "Fundamentals of Fire Extinguishment" has been widely requested and used by fire departments, industrial fire brigades, insurance companies, and other fire protection groups.

Copies are available from Ansul Chemical Co., Marinette, Wis., on request.

Waterloo Fire Department Busy in 1949

The 46th Annual Report of the Waterloo, Iowa, Fire Department, Chief Ray Tiller, for the Year Ending March 31st, showed 938 alarms answered during the year, an increase of 164 over the previous year. Per capita fire loss was $4.79—based on population of 72,000.

The report covers all activities of the Fire Department, including organization, operations training, fire prevention, etc.

Chief Tiller recommends: increase in tax levy to acquire funds for two new fire stations; new fire alarm equipment; purchase of a new 500 GPM pumper; and building up a reserve to later replace the old 1923 aerial truck. He also recommended changes in the parking ordinance and adoption of a fire prevention ordinance and one to prevent use of wooden shingles. Suggested also were ordinances to regulate transportation of volatile liquids and abolish grade crossings.

Volunteer Firemen!

Make 40% Selling New Type Automatic Home Fire Alarm System

Can Be Quickly Installed by Purchaser

$39.50 Retail Price

Less Your Commission

U.L. Approved Rate-of-Rise Detectors

COMPLETE IN 1 PACKAGE

Every home is a prospect for this low cost FIRE-LITE Automatic Home Fire Alarm System. It detects fire instantly and sounds a shrill, loud alarm. Anyone can easily install it. Protects entire home. FIRE-LITE is equipped with a control cabinet, relay panel and test switch, a long life battery, two automatic fire detectors, 100 feet of insulated wire, a loud bell, insulated staples and a wiring diagram. Sell one homeowner and you'll sell his neighbors and friends!

Write TODAY for a Dealership

FIRE-LITE ALARMS

174 Shelton Ave., New Haven, Conn.

Chief---

CAN YOU PUT OUT A CHIMNEY FIRE for 60¢?

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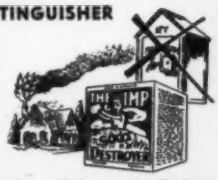
CHIMNEY FIRE EXTINGUISHER



Save rushing to chimney fires—avoid slippery roofs by using IMP Chimney Fire Extinguisher. Just throw a 60c package "as is" on the hottest part of of the fire in the stove, furnace or fireplace. The chimney fire will be out in jigtime without water or chemical damage. Recommended by many chiefs who carry IMP in their cars.

ALSO—LIQUID IMP for *oil fired units*. Saves oil, money, increases heat, prevents sludge, reduces carbon deposits and is safe. You know what a fire hazard these are. Use LIQUID IMP in your own burners. 3½ oz. enough for 70 gals. kerosene or 35 gals. No. 2 fuel oil; 16 oz. enough for 5 times above quantity; 1 gal. enough for 1600 gals. #2 fuel.

USE THIS COUPON FOR YOUR ORDER

F. C. FOARD & CO., Box 481, Bridgeport 1, Conn.

Please send.....doz. package of IMP @ $7.20 per doz.
and/or.....doz. 3½ oz. Liquid IMP @ $9.00 per doz.
.....doz. 16 oz. Liquid IMP @ $27.00 per doz.
.....gallons Liquid IMP @ $14.00 per gal.

I will honor your bill f.o.b. Bridgeport.

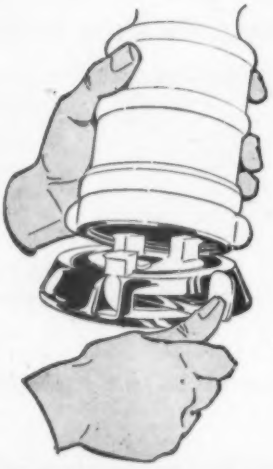
NAME .....

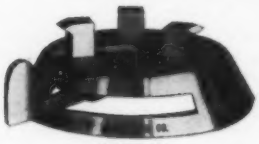
ADDRESS .....

CITY..... STATE.....

FIRE EQUIPMENT DISTRIBUTORS ATTENTION!
Add package and Liquid IMP to your line.
Write TODAY for special distributor Plan.

TRI-LOC NOZZLE HOLDER





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Available in 1½" and 2½" Sizes

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Fire Hose Is EXPENDABLE . . . *and* EXPENSIVE

Patented

CIRCUL-AIR

THE AIR CONDITIONING FIRE HOSE DRYER

Don't gamble your $1.60 hose against damage from mildew and rot when, for a nominal investment in a CIRCUL-AIR you can dry it QUICKLY, SURELY, SAFELY and EASILY.

CIRCUL-AIR is the patented, electrically operated HOSE DRYER which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It was designed to lengthen hose life; improve the appearance and functional design of new fire houses; and to save floor space and hard work. NO OTHER METHOD is so fast—so easy to use—so economical.

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NOVEMBER, 1950

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